Journal of Biomedical Materials Research
Author Index—Volume 75A

Abe, M.
—; Takahashi, M.; Nagano, A.: The effect of hyaluronic acid with different molecular weights on collagen crosslink synthesis in cultured chondrocytes embedded in collagen gels, 494
Abraham, J.
—; Grenón, M.; Sánchez, H. J.; Pérez, C.; Barrea, R.: A case study of elemental and structural composition of dental calculus during several stages of maturation using SRXRF, 623
Aggarwal, P.
—; Phaneuf, M. D.; Bide, M. J.; Sousa, K. A.; LoGerfo, F. W.: Development of an infection-resistant bifunctionalized Dacron biomaterial, 224
Agung, M. See Nakasa, T., 350
Akbari, H. See Dinarvand, R., 185
Alimorad, M. M. See Dinarvand, R., 185
Alkhateeb, E.
—; Virtanen, S.: Influence of surface self-modification in Ringer's solution on the passive behavior of titanium, 934
Allara, D. See Krishnan, A., 445
Aloisi, R. See Saravino, L., 324
Amanlou, M. See Dinarvand, R., 185
Amaral, I. F.
—; Lamghari, M.; Sousa, S. R.; Sampaio, P.; Barbosa, M. A.: Rat bone marrow stromal cell osteogenic differentiation and fibronectin adsorption on chitosan membranes: The effect of the degree of acetylation, 387
Anderson, J. See Ebert, M., 175; Maeyama, R., 146
Anselme, K. See Bigerelle, M., 530
Anseth, K. S. See Cushing, M. C., 232
Antoniou, J. See Nelea, V., 216
Arciola, C. R.
—; Gamberini, S.; Campoccia, D.; Visai, L.; Speziale, P.; Baldassarri, L.; Montanaro, L.: A multiplex PCR method for the detection of all five individual genes of *ica* locus in *Staphylococcus epidermidis*. A survey on 400 clinical isolates from prosthesis-associated infections, 408
Aro, H. T. See Välimäki, V.-V., 501
Aronow, M. S. See Zhang, H., 98
Avgoustakis, K. See Pierri, E., 639
Ayats, C. See Tonda, R., 192
Azarov, D. See Bloch, K., 802

Baggett, L. S. See Holland, T. A., 156
Baldassarri, L. See Arciola, C. R., 408
Baldini, N. See Saravino, L., 324
Balthasar, J. P. See Emregul, E., 648
Bandyopadhyay, A. See Rokusek, D., 588
Barbosa, M. A. See Amaral, I. F., 387
Barrea, R. See Abraham, J., 623
Batchelor, M. M. See Gifford, R., 755
Bauer, T. W. See Kobayashi, N., 123
Bechtold, J. E. See Elmengaard, B., 249
Benayahu, D. See Shur, I.,
Benetti, D. See Saravino, L., 324
Berilla, J. A. See Penick, K. J., 168
Beyar, R. See Livnat, M., 710
Bide, M. J. See Aggarwal, P., 224
Bigerelle, M.
—; Anselme, K.: A kinetic approach to osteoblast adhesion on biomaterial surface, 530
Bjursten, L. M. See Rosengren, A., 115
Bloch, K.
—; Lozinsky, V. I.; Galaev, I. Y.; Yavriyanz, K.; Vorobychik, M.; Azarov, D.; Damshkaln, L. G., Mattiasson, B.; Vardi, P.: Functional activity of insulinoma cells (INS-1E) and pancreatic islets cultured in agarose cryogel sponges, 802
Boccaccini, A. R. See Day, R. M., 778
Bodde, E. W. H. See Holland, T. A., 156
Bose, S. See Rokusek, D., 588
Boughner, D. R. See Cimini, M., 895
Bourban, P-E. See Mathieu, L. M., 89
Brankamp, J. See von Knoch, F., 288
Brice, V. See Gall, K., 810
Bryers, J. D. See Jarvis, R. A., 41
Burguera, E. F.
—; Xu, H. H. K.; Takagi, S.; Chow, L. C.: High early strength calcium phosphate bone cement: Effects of dicalcium phosphate dihydrate and absorbable fibers, 966
Burian, B. See Kraft, C. N., 31

Cai, J.
—; Peng, X.; Nelson, K. D.; Eberhart, R.; Smith, G. M.: Permeable guidance channels containing microfilament scaffolds enhance axon growth and maturation, 374
Calonder, C.
—; Matthew, H. W. T.; Van Tassel, P. R.: Adsorbed layers of oriented fibronectin: A strategy to control cell–surface interactions, 316
Campoccia, D. See Arciola, C. R., 408
Canavan, H. E.
—; Cheng, X.; Graham, D. J.; Ratner, B. D.; Castner, D. G.: Cell sheet detachment affects the extracellular matrix: A surface science study comparing thermal liftoff, enzymatic, and mechanical methods, 1
Cao, W. See Kong, L., 275
Castner, D. G. See Canavan, H. E., 1
Cha, P. See Krishnan, A., 445
Chan, B. P.
—; So, K.-F.: Photochemical crosslinking improves the physicochemical properties of collagen scaffolds, 689
Chan, D. See Yeung, K. W. K., 256
Chang, N.-C. See Shih, C.-M., 519
Chao, G. T. See Liu, C. B., 465
Chen, H.
—; Ouyang, W.; Lawuyi, B.; Martoni, C.; Prakash, S.: Reaction of chitosan with genipin and its fluorogenic attributes for potential

Journal of Biomedical Materials Research
Author Index—Volume 75A

Abe, M.
—; Takahashi, M.; Nagano, A.: The effect of hyaluronic acid with different molecular weights on collagen crosslink synthesis in cultured chondrocytes embedded in collagen gels, 494
Abraham, J.
—; Grenón, M.; Sánchez, H. J.; Pérez, C.; Barrea, R.: A case study of elemental and structural composition of dental calculus during several stages of maturation using SRXRF, 623
Aggarwal, P.
—; Phaneuf, M. D.; Bide, M. J.; Sousa, K. A.; LoGerfo, F. W.: Development of an infection-resistant bifunctionalized Dacron biomaterial, 224
Agung, M. See Nakasa, T., 350
Akbari, H. See Dinarvand, R., 185
Alimorad, M. M. See Dinarvand, R., 185
Alkhateeb, E.
—; Virtanen, S.: Influence of surface self-modification in Ringer's solution on the passive behavior of titanium, 934
Allara, D. See Krishnan, A., 445
Aloisi, R. See Saravino, L., 324
Amanlou, M. See Dinarvand, R., 185
Amaral, I. F.
—; Lamghari, M.; Sousa, S. R.; Sampaio, P.; Barbosa, M. A.: Rat bone marrow stromal cell osteogenic differentiation and fibronectin adsorption on chitosan membranes: The effect of the degree of acetylation, 387
Anderson, J. See Ebert, M., 175; Maeyama, R., 146
Anselme, K. See Bigerelle, M., 530
Anseth, K. S. See Cushing, M. C., 232
Antoniou, J. See Nelea, V., 216
Arciola, C. R.
—; Gamberini, S.; Campoccia, D.; Visai, L.; Speziale, P.; Baldassarri, L.; Montanaro, L.: A multiplex PCR method for the detection of all five individual genes of *ica* locus in *Staphylococcus epidermidis*. A survey on 400 clinical isolates from prosthesis-associated infections, 408
Aro, H. T. See Välimäki, V.-V., 501
Aronow, M. S. See Zhang, H., 98
Avgoustakis, K. See Pierri, E., 639
Ayats, C. See Tonda, R., 192
Azarov, D. See Bloch, K., 802

Baggett, L. S. See Holland, T. A., 156
Baldassarri, L. See Arciola, C. R., 408
Baldini, N. See Saravino, L., 324
Balthasar, J. P. See Emregul, E., 648
Bandyopadhyay, A. See Rokusek, D., 588
Barbosa, M. A. See Amaral, I. F., 387
Barrea, R. See Abraham, J., 623
Batchelor, M. M. See Gifford, R., 755
Bauer, T. W. See Kobayashi, N., 123
Bechtold, J. E. See Elmengaard, B., 249
Benayahu, D. See Shur, I.,
Benetti, D. See Saravino, L., 324
Berilla, J. A. See Penick, K. J., 168
Beyar, R. See Livnat, M., 710
Bide, M. J. See Aggarwal, P., 224
Bigerelle, M.
—; Anselme, K.: A kinetic approach to osteoblast adhesion on biomaterial surface, 530
Bjursten, L. M. See Rosengren, A., 115
Bloch, K.
—; Lozinsky, V. I.; Galaev, I. Y.; Yavriyanz, K.; Vorobychik, M.; Azarov, D.; Damshkaln, L. G., Mattiasson, B.; Vardi, P.: Functional activity of insulinoma cells (INS-1E) and pancreatic islets cultured in agarose cryogel sponges, 802
Boccaccini, A. R. See Day, R. M., 778
Bodde, E. W. H. See Holland, T. A., 156
Bose, S. See Rokusek, D., 588
Boughner, D. R. See Cimini, M., 895
Bourban, P-E. See Mathieu, L. M., 89
Brankamp, J. See von Knoch, F., 288
Brice, V. See Gall, K., 810
Bryers, J. D. See Jarvis, R. A., 41
Burguera, E. F.
—; Xu, H. H. K.; Takagi, S.; Chow, L. C.: High early strength calcium phosphate bone cement: Effects of dicalcium phosphate dihydrate and absorbable fibers, 966
Burian, B. See Kraft, C. N., 31

Cai, J.
—; Peng, X.; Nelson, K. D.; Eberhart, R.; Smith, G. M.: Permeable guidance channels containing microfilament scaffolds enhance axon growth and maturation, 374
Calonder, C.
—; Matthew, H. W. T.; Van Tassel, P. R.: Adsorbed layers of oriented fibronectin: A strategy to control cell–surface interactions, 316
Campoccia, D. See Arciola, C. R., 408
Canavan, H. E.
—; Cheng, X.; Graham, D. J.; Ratner, B. D.; Castner, D. G.: Cell sheet detachment affects the extracellular matrix: A surface science study comparing thermal liftoff, enzymatic, and mechanical methods, 1
Cao, W. See Kong, L., 275
Castner, D. G. See Canavan, H. E., 1
Cha, P. See Krishnan, A., 445
Chan, B. P.
—; So, K.-F.: Photochemical crosslinking improves the physicochemical properties of collagen scaffolds, 689
Chan, D. See Yeung, K. W. K., 256
Chang, N.-C. See Shih, C.-M., 519
Chao, G. T. See Liu, C. B., 465
Chen, H.
—; Ouyang, W.; Lawuyi, B.; Martoni, C.; Prakash, S.: Reaction of chitosan with genipin and its fluorogenic attributes for potential

microcapsule membrane characterization, 917
Chen, J.-S. See Chen, W.-B., 128
Chen, W.-B.
—; Wang, L.-F.; Chen, J.-S.; Fan, S.-Y.: Characterization of polyelectrolyte complexes between chondroitin sulfate and chitosan in the solid state, 128
Cheng, X. See Canavan, H. E., 1
Cheung, K. M. C. See Yeung, K. W. K., 256
Chiang, C. H. See Huang, Y. C., 283
Choi, Y. J.
—; Choung, S. K.; Hong, C. M.; Shin, I. S.; Park, S. N.; Hong, S. H.; Park, H. K.; Park, Y. H.; Son, Y.; Noh, I.: Evaluations of blood compatibility via protein adsorption treatment of the vascular scaffold surfaces fabricated with polylactide and surface-modified expanded polytetrafluoroethylene for tissue engineering applications, 824
Choong, C. See Oyane, A., 138
Choung, S. K. See Choi, Y. J., 824
Chow, L. C. See Burguera, E. F., 966
Chu, C. L.
—; Chung, C. Y.; Zhou, J.; Pu, Y. P.; Lin, P. H.: Fabrication and characteristics of bioactive sodium titanate/titania graded film on NiTi shape memory alloy, 595
Chu, P. K. See Yeung, K. W. K., 256
Chung, C. Y. See Chu, C. L., 595; Yeung, K. W. K., 256
Chung, E. H. See Kim, S., 73
Cimini, M.
—; Boughner, D. R.; Ronald, J. A.; Johnston, D. E.; Rogers, K. A.: Dermal fibroblasts cultured on small intestinal submucosa: Conditions for the formation of a neotissue, 895
Co, C. C. See Yang, I. H., 976
Coger, R. N. See Zinchenko, Y. S., 242
Colombo, G.
—; Padera, R.; Langer, R.; Kohane, D. S.: Prolonged duration local anesthesia with lipid–protein–sugar particles containing bupivacaine and dexamethasone, 458
Composto, R. J. See Uttayarat, P., 668
Coreño, J.
—; Coreño, O.: Evaluation of calcium titanate as apatite growth promoter, 478
Coreño, O. See Coreño, J., 478
Curtis, A. S. G. See Meredith, D. O., 541
Cushing, M. C.
—; Jaeggli, M. P.; Masters, K. S.; Leinwand, L. A.; Anseth, K. S.: Serum deprivation improves seeding and repopulation of acellular matrices with valvular interstitial cells, 232

Damshkaln, L. G. See Bloch, K., 802
Danilov, A. See Muhonen, V., 681
David, A. See Emregul, E., 648
Davitt, C. See Rokusek, D., 588
Day, R. M.
—; Maquet, V.; Boccaccini, A. R.; Jérome, R.; Forbes, A.: *In vitro* and *in vivo* analysis of macropous biodegradable poly(D,L-lactide-*co*-glycolide) scaffolds containing bioactive glass, 778
De Franceschi, L.
—; Grigolo, B.; Roseti, L.; Facchini, A.; Fini, M.; Giavaresi, G.; Tschon, M.; Giardino, R.: Transplantation of chondrocytes seeded on collagen-based scaffold in cartilage defects in rabbits, 612
Deie, M. See Yamasaki, T., 23
Demers, C. N. See Nelea, V., 216
de Wijn, J. R. See Moroni, L., 957
Dianzani, C. See Saravino, L., 324
Diedrich, O. See Kraft, C. N., 31
Diehl, K. A.
—; Foley, J. D.; Nealey, P. F.; Murphy, C. J.: Nanoscale topography modulates corneal epithelial cell migration, 603
Dietrich, F. See Uttayarat, P., 668
Dinarvand, R.
—; Alimorad, M. M.; Amanlou, M.; Akbari, H.: *In vitro* release of clomipramine HCL and buprenorphine HCL from poly adipic anhydride (PAA) and poly trimethylene carbonate (PTMC) blends, 185
Ding, C. See Zhao, X., 888
Ding, J. See Wu, L., 767; Zhang, Y., 342
Doi, T. See Yoneno, K., 733
Duan, X.
—; Sheardown, H.: Crosslinking of collagen with dendrimers, 510
Ducheyne, P. See Lai, W., 398; Yao, J., 794

Eberhart, R. See Cai, J., 374
Ebert, M.
—; Ward, B.; Anderson, J.; McVenes, R.; Stokes, K.: *In vivo* biostability of polyether polyurethanes with polyethylene oxide surface-modifying end groups; resistance to biologic oxidation and stress cracking, 175
Einav, S. See Shur, I., 870
Ekholm, E. See Holmbom, J., 308
Elbert, D. L. See Kim, J.-K., 199
Elmengaard, B.
—; Bechtold, J. E.; Søballe, K.: *In vivo* effects of RGD-coated titanium implants inserted in two bone-gap models, 249
Emregul, E.
—; David, A.; Balthasar, J. P.; Yang, V. C.: A CPIIb/IIIa bioreactor for specific treatment of immune thrombocytopenic purpura, an autoimmune disease. Preparation, *in vitro* characterization, and preliminary proof-of-concept animal studies, 648
Eschbach, L. See Meredith, D. O., 541
Escolar, G. See Tonda, R., 192

Facchini, A. See De Franceschi, L., 612
Fan, L. Y. See Liu, C. B., 465
Fan, S.-H. See Chen, W.-B., 128
Fantozzi, R. See Saravino, L., 324
Faxius, L. See Rosengren, A., 115
Feng, M. See Li, K., 268
Fini, M. See De Franceschi, L., 612
Flaitz, C. See Lai, W., 398
Foley, J. D. See Diehl, K. A., 603
Forbes, A. See Day, R. M., 778
Frascarelli, S. See Saravino, L., 324
Frick, C. P. See Gall, K., 810
Fuchs, J. R. See Terada, S., 907
Fujishiro, T. See Kobayashi, N., 123

Galaev, I. Y. See Bloch, K., 802
Galán, A. M. See Tonda, R., 192
Gall, K.
—; Tyber, J.; Brice, V.; Frick, C. P.; Maier, H. J.; Morgan, N.: Tensile deformation of NiTi wires, 810
Gamberini, S. See Arciola, C. R., 408
Gao, Y. See Kong, L., 275
Garino, J. See Lai, W., 398
Gessmann, J. See Kraft, C. N., 31
Ghicov, A. See Macak, J. M., 928
Giardino, R. See De Franceschi, L., 612
Giavaresi, G. See De Franceschi, L., 612

Gifford, R.
—; Batchelor, M. M.; Lee, Y.; Gokulrangan, G.; Meyerhoff, M. E.; Wilson, G. S.: Mediation of *in vivo* glucose sensor inflammatory response via nitric oxide release, 755
Gilbert, M. See Kim, S., 73
Glawe, J. D.
—; Hill, J. B.; Mills, D. K.; McShane, M. J.: Influence of channel width on alignment of smooth muscle cells by high-aspect-ratio microfabricated elastomeric cell culture scaffolds, 106
Gogolewski, S. See Gugala, Z., 702
Gokulrangan, G. See Gifford, R., 755
Gong, Y., 985, J., Li, See. See Kong, L., 275
Goto, K. See Hasegawa, S., 567
Graham, D. J. See Canavan, H. E., 1
Gratzer, P. F. See Harrison, R. D., 841
Greco, M. See Saravino, L., 324
Grenón, M. See Abraham, J., 623
Grigolo, B. See De Franceschi, L., 612
Gronowicz, G. A. See Zhang, H., 98
Gu, Y. C. See Liu, C. B., 465
Gugala, Z.
—; Gogolewski, S.: The *in vitro* growth and activity of sheep osteoblasts on three-dimensional scaffolds from poly(L/DL-lactide) 80/20%, 702
Gunduz, M. See Tsujigiwa, H., 210
Gutowska, I.
—; Machoy, Z.; Machaliński, B.: The role of bivalent metals in hydroxyapatite structures as revealed by molecular modeling with the HyperChem software, 788

Hannouche, D. See Terada, S., 907
Hansson, K. N. See Hansson, S., 472
Hansson, S.
—; Hansson, K. N.: The effect of limited lateral resolution in the measurement of implant surface roughness: A computer simulation, 472
Harbers, G. M.
—; Healy, K. E.: The effect of ligand type and density on osteoblast adhesion, proliferation, and matrix mineralization, 855
Harrison, R. D.
—; Gratzer, P. F.: Effect of extraction protocols and epidermal growth factor on the cellular repopulation of decellularized anterior cruciate ligament allografts, 841
Hasegawa, S.
—; Tamura, J.; Neo, M.; Goto, K.; Shikinami, Y.; Saito, M.; Kita, M.; Nakamura, T.: *In vivo* evaluation of a porous hydroxyapatite/poly-DL-lactide composite for use as a bone substitute, 567
Healy, K. E. See Harbers, G. M., 855; Kim, S., 73
Heard, P. J. See Lewis, A. C., 365
Heckelei, A. See von Knoch, F., 288
Heikkinen, R. See Muhonen, V., 681
Henschke, F. See von Knoch, F., 288
Hernández, M. R. See Tonda, R., 192
Hilken, G. See von Knoch, F., 288
Hill, J. B. See Glawe, J. D., 106
Ho, C.-C. See Yang, I. H., 976
Ho, J. P. Y. See Yeung, K. W. K., 256
Holland, T. A.
—; Bodde, E. W. H.; Baggett, L. S.; Tabata, Y.; Mikos, A. G.; Jansen, J. A.: Osteochondral repair in the rabbit model utilizing bilayered, degradable oligo(poly(ethylene glycol) fumarate) hydrogel scaffolds, 156
Holmbom, J.
—; Södergård, A.; Ekholm, E.; Märtson, M.; Kuusilehto, A.; Saukko, P.; Penttinen, R.: Long-term evaluation of porous poly(ϵ-caprolactone-*co*-L-lactide) as a bone-filling material, 308
Homaeigohar, S. SH.
—; Shokrgozar, M. A.; Sadi, A. Y.; Khavandi, A.; Javadpour, J.; Hosseinalipour, M.: *In vitro* evaluation of biocompatibility of beta-tricalcium phosphate-reinforced high-density polyethylene; an orthopedic composite, 14
Honda, K. See Yoneno, K., 733
Hong, C. M. See Choi, Y. J., 824
Hong, S. H. See Choi, Y. J., 824
Hosick, H. L. See Rokusek, D., 588
Hosseinalipour, M. See Homaeigohar, S. SH., 14
Huang, K. L. See Huang, Y. C., 283
Huang, Y. C.
—; Vieira, A.; Huang, K. L.; Yeh, M. K.; Chiang, C. H.: Pulmonary inflammation caused by chitosan microparticles, 283
Hutmacher, D. W. See Ng, K. W., 425

Ilvesaro, J. See Muhonen, V., 681
Inoue, M. See Tsujigiwa, H., 210
Isama, K. See Matsuoka, A., 439
Ishida, O. See Nakasa, T., 350
Ito, A. See Oyane, A., 138
Izuta, Y. See Yamasaki, T., 23

Jaeggli, M. P. See Cushing, M. C., 232
Jämsä, T. See Muhonen, V., 681
Jansen, J. A. See Holland, T. A., 156; Loesberg, W. A., 723
Jarvis, R. A.
—; Bryers, J. D.: Effects of controlled fibronectin surface orientation on subsequent *Staphylococcus epidermidis* adhesion, 41
Javadpour, J. See Homaeigohar, S. SH., 14
Jérome, R. See Day, R. M., 778
Jia, W. J. See Liu, C. B., 465
Johnston, D. E. See Cimini, M., 895
Jun, I.-K. See Kim, H.-W., 656

Kapila, S. See Yoneno, K., 733
Kasper, C. See Vlakh, E. G., 333
Kawata, T. See Yoneno, K., 733
Khavandi, A. See Homaeigohar, S. SH., 14
Kim, H.-E. See Kim, H.-W., 629; Kim, H.-W., 656
Kim, H.-W.
—; Lee, E.-J.; Jun, I.-K.; Kim, H.-E.: On the feasibility of phosphate glass and hydroxyapatite engineered coating on titanium, 656
—; Li, L.-H.; Lee, E.-J.; Lee, S.-H.; Kim, H.-E.: Fibrillar assembly and stability of collagen coating on titanium for improved osteoblast responses, 629
Kim, J.-K.
—; Scott, E. A.; Elbert, D. L.: Proteomic analysis of protein adsorption: Serum amyloid P adsorbs to materials and promotes leukocyte adhesion, 199
Kim, S.
—; Chung, E. H.; Gilbert, M.; Healy, K. E.: Synthetic MMP-13 degradable ECMs based on poly(N-isopropylacrylamide-*co*-acrylic acid) semi-interpenetrating polymer networks. I. Degradation and cell migration, 73
Kita, M. See Hasegawa, S., 567
Kobayashi, N.
—; Togawa, D.; Fujishiro, T.; Powell, K. A.; Turner, A. S.; Seim, H. B. III; Bauer, T. W.: Histological and radiographic evaluation of polymethylmethacrylate with two different concentrations of barium sulfate in a sheep vertebroplasty model, 123

Kohane, D. S. See Colombo, G., 458
Kong, L.
—; Gao, Y.; Cao, W.; Gong, Y.; Zhao, N.; Zhang, X.: Preparation and characterization of nano-hydroxyapatite/chitosan composite scaffolds, 275
Kraft, C. N.
—; Burian, B.; Diedrich, O.; Gessmann, J.; Wimmer, M. A.; Pennekamp, P. H.: Microvascular response of striated muscle to common arthroplasty-alloys: A comparative *in vivo* study with CoCrMo, Ti-6AI-4V, and Ti-6AI-7Nb, 31
Krishnan, A.
—; Liu, Y.-H.; Cha, P.; Allara, D.; Vogler, E. A.: Scaled interfacial activity of proteins at a hydrophobic solid/aqueous-buffer interface, 445
Kuusilehto, A. See Holmbom, J., 308
Kwon, I. K. See Maeyama, R., 146

Lai, W.
—; Garino, J.; Flaitz, C.; Ducheyne, P.: Excretion of resorption products from bioactive glass implanted in rabbit muscle, 398
Lamghari, M. See Amaral, I. F., 387
Landgraeber, S. See von Knoch, F., 288
Langer, R. See Colombo, G., 458
Lawuyi, B. See Chen, H., 917
Leboy, P. S. See Yao, J., 794
Lee, E.-J. See Kim, H.-W., 629; Kim, H.-W., 656
Lee, S.-H. See Kim, H.-W., 629
Lee, Y. See Gifford, R., 755
LeGeros, R. Z. See Tsujigiwa, H., 210
Leinwand, L. A. See Cushing, M. C., 232
Lelkes, P. I. See Uttayarat, P., 668
Lerouge, S. See Nelea, V., 216
Lewis, A. C.
—; Heard, P. J.: The effects of calcium phosphate deposition upon corrosion of CoCr alloys and the potential for implant failure, 365
Lewis, G. See Qi, G., 414
Li, J. See Liu, C. B., 465; Qi, G., 414
—; Yun, H.; Gong, Y.; Zhao, N.; Zhang, X.: Effects of surface modification of poly (3-hydroxybutyrate-*co*-3-hydroxyhexanoate) (PHBHHx) on physicochemical properties and on interactions with MC3T3-E1 cells, 985
Li, K.
—; Qu, X.; Wang, Yun; Tang, Y.; Qin, D.; Wang, Yanjun; Feng, M.: Improved performance of primary rat hepatocytes on blended natural polymers, 268
Li, L.-H. See Kim, H.-W., 629
Li, Z.
—; Zhang, M.: Chitosan–alginate as scaffolding material for cartilage tissue engineering, 485
Lim, T. C. See Ng, K. W., 425
Lin, H.-Y. See Subramanian, A., 742
Lin, P. H. See Chu, C. L., 595
Lin, S.-J. See Shih, C.-M., 519
Liu, C. B.
—; Gu, Y. C.; Qian, Z. Y.; Fan, L. Y.; Li, J.; Chao, G. T.; Tu, M. J.; Jia, W. J.: Hydrolytic degradation behavior of biodegradable polyetheresteramide-based polyurethane copolymers, 465
Liu, L. See Qiu, C. L., 950
Liu, X. See Zhao, X., 888
Liu, X. Y. See Yeung, K. W. K., 256
Liu, Y.-H. See Krishnan, A., 445
Livnat, M.
—; Beyar, R.; Seliktar, D.: Endoluminal hydrogel films made of alginate and polyethylene glycol: Physical characteristics and drug-eluting properties, 710
Löer, F. See von Knoch, F., 288
Loesberg, W. A.
—; Walboomers, X. F.; van Loon, J. J. W. A.; Jansen, J. A.: The effect of combined cyclic mechanical stretching and microgrooved surface topography on the behavior of fibroblasts, 723
LoGerfo, F. W. See Aggarwal, P., 224
Lozinsky, V. I. See Bloch, K., 802
Lu, L. See Rajagopalan, S., 877
Lu, W. W. See Yeung, K. W. K., 256
Luo, L. See Nelea, V., 216

Macak, J. M.
—; Tsuchiya, H.; Taveira, L.; Ghicov, A.; Schmuki, P.: Self-organized nanotubular oxide layers on Ti-6Al-7Nb and Ti-6Al-4V formed by anodization in NH_4F solutions, 928
Machaliński, B. See Gutowska, I., 788
Machoy, Z. See Gutowska, I., 788
Maeyama, R.
—; Kwon, I. K.; Mizunoe, Y.; Anderson, J. M.; Tanaka, M.; Matsuda, T.: Novel bactericidal surface: Catechin-loaded surface-erodible polymer prevents biofilm formation, 146
Maier, H. J. See Gall, K., 810
Månson, J.-A. E. See Mathieu, L. M., 89
Maquet, V. See Day, R. M., 778
Martoni, C. See Chen, H., 917
Märtson, M. See Holmbom, J., 308
Masters, K. S. See Cushing, M. C., 232
Mathieu, L. M.
—; Montjovent, M.-O.; Bourban, P-E.; Pioletti, D. P.; Månson, J.-A. E.: Bioresorbable composites prepared by supercritical fluid foaming, 89
Matsuda, T. See Maeyama, R., 146
Matsuoka, A.
—; Isama, K.; Tsuchiya, T.: *In vitro* induction of polyploidy and chromatid exchanges by culture medium extracts of natural rubbers compounded with 2-mercaptobenzothiazole as a positive control candidate for genotoxicity tests, 439
Matthew, H. W. T. See Calonder, C., 316
Mattiasson, B. See Bloch, K., 802
McShane, M. J. See Glawe, J. D., 106
McVenes, R. See Ebert, M., 175
Meredith, D. O.
—; Eschbach, L.; Wood, M. A.; Riehle, M. O.; Curtis, A. S. G.; Richards, R. G.: Human fibroblast reactions to standard and electropolished titanium and Ti–6Al–7Nb, and electropolished stainless steel, 541
Merhi, Y. See Thierry, B., 556
Meyerhoff, M. E. See Gifford, R., 755
Mian, M. See Saravino, L., 324
Mikos, A. G. See Holland, T. A., 156
Mills, D. K. See Glawe, J. D., 106
Mizunoe, Y. See Maeyama, R., 146
Montanaro, L. See Arciola, C. R., 408
Montjovent, M.-O. See Mathieu, L. M., 89
Morgan, N. See Gall, K., 810
Moroni, L.
—; de Wijn, J. R.; van Blitterswijk, C. A.: Three-dimensional fiber-deposited PEOT/PBT copolymer scaffolds for tissue engineering: Influence of porosity, molecular network mesh size, and swelling in aqueous media on dynamic mechanical properties, 957
Mouchon, W. P. See Qi, G., 414
Muhonen, V.
—; Heikkinen, R.; Danilov, A.; Jämsä, T.; Ilvesaro, J.; Tuukkanen, J.: The phase state of NiTi implant

material affects osteoclastic attachment, 681
Murphy, C. J. See Diehl, K. A., 603
Mwale, F. See Nelea, V., 216

Nagai, N. See Tsujigiwa, H., 210
Nagano, A. See Abe, M., 494
Nagatsuka, H. See Tsujigiwa, H., 210
Nakamae, A. See Nakasa, T., 350
Nakamura, T. See Hasegawa, S., 567
Nakasa, T.
—; Ishida, O.; Sunagawa, T.; Nakamae, A.; Yasunaga, Y.; Agung, M.; Ochi, M.: Prefabrication of vascularized bone graft using a combination of fibroblast growth factor-2 and vascular bundle implantation into a novel interconnected porous calcium hydroxyapatite ceramic, 350
Nealey, P. F. See Diehl, K. A., 603
Nelea, V.
—; Luo, L.; Demers, C. N.; Antoniou, J.; Petit, A.; Lerouge, S.; Wertheimer, M. R.; Mwale, F.: Selective inhibition of type X collagen expression in human mesenchymal stem cell differentiation on polymer substrates surface-modified by glow discharge plasma, 216
Nelson, K. D. See Cai, J., 374
Neo, M. See Hasegawa, S., 567
Ng, K. W.
—; Tham, W.; Lim, T. C.; Hutmacher, D. W.: Assimilating cell sheets and hybrid scaffolds for dermal tissue engineering, 425
Noh, I. See Choi, Y. J., 824

Ochi, M. See Nakasa, T., 350; Yamasaki, T., 23
Ohno, S. See Yoneno, K., 733
Ordinas, A. See Tonda, R., 192
Ouyang, W. See Chen, H., 917
Oyane, A.
—; Uchida, M.; Yokoyama, Y.; Choong, C.; Triffitt, J.; Ito, A.: Simple surface modification of poly(Î-caprolactone) to induce its apatite-forming ability, 138

Padera, R. See Colombo, G., 458
Padilla, S.
—; Sánchez-Salcedo, S.; Vallet-Regí, M.: Bioactive and biocompatible pieces of HA/sol-gel glass mixtures obtained by the gel-casting method, 63
Panarin, E. F. See Vlakh, E. G., 333
Park, H. K. See Choi, Y. J., 824
Park, S. N. See Choi, Y. J., 824
Park, Y. H. See Choi, Y. J., 824
Peng, X. See Cai, J., 374
Penick, K. J.
—; Solchaga, L. A.; Berilla, J. A.; Welter, J. F.: Performance of polyoxymethylene plastic (POM) as a component of a tissue engineering bioreactor, 168
Pennekamp, P. H. See Kraft, C. N., 31
Penttinen, R. See Holmbom, J., 308
Pérez, C. See Abraham, J., 623
Perla, V.
—; Webster, T. J.: Better osteoblast adhesion on nanoparticulate selenium—A promising orthopedic implant material, 356
Petit, A. See Nelea, V., 216
Phaneuf, M. D. See Aggarwal, P., 224
Pierri, E.
—; Avgoustakis, K.: Poly(lactide)-poly(ethylene glycol) micelles as a carrier for griseofulvin, 639
Pino, M. See Tonda, R., 192
Pioletti, D. P. See Mathieu, L. M., 89
Pomar, J. L. See Tonda, R., 192
Pomerantseva, I. See Terada, S., 907
Poon, R. W. Y. See Yeung, K. W. K., 256
Powell, K. A. See Kobayashi, N., 123
Prakash, S. See Chen, H., 917
Pu, Y. P. See Chu, C. L., 595

Qi, G.
—; Li, J.; Mouchon, W. P.; Lewis, G.: Defect-induced fatigue microcrack formation in cement mantle, 414
Qian, Z. Y. See Liu, C. B., 465
Qin, D. See Li, K., 268
Qiu, C. L.
—; Liu, L.; Sun, M.; Zhang, S. M.: The effect of Nb addition on mechanical properties, corrosion behavior, and metal-ion release of ZrAlCuNi bulk metallic glasses in artificial body fluid, 950
Qu, X. See Li, K., 268

Radin, S. See Yao, J., 794
Rajagopalan, S.
—; Lu, L.; Yaszemski, M. J.; Robb, R. A.: Optimal segmentation of microcomputed tomographic images of porous tissue-engineering scaffolds, 877
Ratner, B. D. See Canavan, H. E., 1
Reilly, G. See Yao, J., 794
Richards, R. G. See Meredith, D. O., 541
Riehle, M. O. See Meredith, D. O., 541
Rivera, R. S. See Tsujigiwa, H., 210
Robb, R. A. See Rajagopalan, S., 877
Rodriguez, A. See Tsujigiwa, H., 210
Rogers, K. A. See Cimini, M., 895
Rokusek, D.
—; Davitt, C.; Bandyopadhyay, A.; Bose, S.; Hosick, H. L.: Interaction of human osteoblasts with bioinert and bioactive ceramic substrates, 588
Ronald, J. A. See Cimini, M., 895
Rosengren, A.
—; Faxius, L.; Tanaka, N.; Watanabe, M.; Bjursten, L. M.: Comparison of implantation and cytotoxicity testing for initially toxic biomaterials, 115
Roseti, L. See De Franceschi, L., 612

Sadi, A. Y. See Homaeigohar, S. SH., 14
Saito, M. See Hasegawa, S., 567
Sampaio, P. See Amaral, I. F., 387
Sánchez, H. J. See Abraham, J., 623
Sánchez-Salcedo, S. See Padilla, S., 63
Sato, M. See Terada, S., 907
Saukko, P. See Holmbom, J., 308
Savarino, L.
—; Benetti, D.; Baldini, N.; Tarabusi, C.; Greco, M.; Aloisi, R.; Frascarelli, S.; Fantozzi, R.; Dianzani, C.; Mian, M.: A preliminary *in vitro* and *in vivo* study of the effects of new anthraquinones on neutrophils and bone remodeling, 324
Saxler, G. See von Knoch, F., 288
Schmuki, P. See Macak, J. M., 928
Scott, E. A. See Kim, J.-K., 199
Sefton, M. V. See Sosnik, A., 295
Seim, H. B. III. See Kobayashi, N., 123
Selig, M. K. See Terada, S., 907
Seliktar, D. See Livnat, M., 710
Sharman, P. See Yamasaki, T., 23
Sheardown, H. See Duan, X., 510
Shih, C.-C. See Shih, C.-M., 519
Shih, C.-M.
—; Shih, C.-C.; Su, Y.-Y.; Chang, N.-C.; Lin, S.-J.: *In vitro* study of drug loading on polymer-free oxide films of metallic implants, 519
Shikinami, Y. See Hasegawa, S., 567
Shin, I. S. See Choi, Y. J., 824
Shinomiya, R. See Yamasaki, T., 23

Shokrgozar, M. A. See Homaeigohar, S. SH., 14
Shur, I.
—; Zilberman, M.; Benayahu, D.; Einav, S.: Adhesion molecule expression by osteogenic cells cultured on various biodegradable scaffolds, 870
Silver, J. See Thierry, B., 556
Smith, G. M. See Cai, J., 374
So, K.-F. See Chan, B. P., 689
Søballe, K. See Elmengaard, B., 249
Södergård, A. See Holmbom, J., 308
Solchaga, L. A. See Penick, K. J., 168
Son, Y. See Choi, Y. J., 824
Sosnik, A.
—; Sefton, M. V.: Poloxamine hydrogels with a quaternary ammonium modification to improve cell attachment, 295
Sousa, K. A. See Aggarwal, P., 224
Sousa, S. R. See Amaral, I. F., 387
Spencer, P. See Wang, Y., 580
Speziale, P. See Arciola, C. R., 408
Sterner, T. See von Knoch, F., 288
Stokes, K. See Ebert, M., 175
Su, Y.-Y. See Shih, C.-M., 519
Subramanian, A.
—; Lin, H.-Y.: Crosslinked chitosan: Its physical properties and the effects of matrix stiffness on chondrocyte cell morphology and proliferation, 742
Suck, K. See Vlakh, E. G., 333
Sun, M. See Qiu, C. L., 950
Sunagawa, T. See Nakasa, T., 350

Tabata, Y. See Holland, T. A., 156
Tabrizian, M. See Thierry, B., 556
Takagi, S. See Burguera, E. F., 966
Takahashi, M. See Abe, M., 494
Tamura, J. See Hasegawa, S., 567
Tan, W. B.
—; Zhang, Y.: Surface modification of gold and quantum dot nanoparticles with chitosan for bioapplications, 56
Tanaka, E. See Yoneno, K., 733
Tanaka, M. See Maeyama, R., 146
Tanaka, N. See Rosengren, A., 115; Yoneno, K., 733
Tang, Y. See Li, K., 268
Tanimoto, K. See Yoneno, K., 733
Tanne, K. See Yoneno, K., 733
Tarabusi, C. See Saravino, L., 324
Taveira, L. See Macak, J. M., 928
Tennikova, T. B. See Vlakh, E. G., 333
Terada, S.
—; Yoshimoto, H.; Fuchs, J. R.; Sato, M.; Pomerantseva, I.; Selig, M. K.; Hannouche, D.; Vacanti, J. P.: Hydrogel optimization for cultured elastic chondrocytes seeded onto a polyglycolic acid scaffold, 907
Tham, W. See Ng, K. W., 425
Thierry, B.
—; Merhi, Y.; Silver, J.; Tabrizian, M.: Biodegradable membrane-covered stent from chitosan-based polymers, 556
Togawa, D. See Kobayashi, N., 123
Tonda, R.
—; Galán, A. M.; Pino, M.; Hernández, M. R.; Ayats, C.; Pomar, J. L.; Ordinas, A.; Escolar, G.: *In vitro* evaluation of platelet reactivity toward annuloplasty devices treated with heparin coating: Studies under flow conditions, 192
Toworfe, G. K. See Uttayarat, P., 668
Triffitt, J. See Oyane, A., 138
Tschon, M. See De Franceschi, L., 612
Tsuchiya, H. See Macak, J. M., 928
Tsuchiya, T. See Matsuoka, A., 439
Tsujigiwa, H.
—; Nagatsuka, H.; Gunduz, M.; Rodriguez, A.; Rivera, R. S.; LeGeros, R. Z.; Inoue, M.; Nagai, N.: Effects of immobilized recombinant human bone morphogenetic protein-2/succinylated type I atelocollagen on cellular activity of ST2 cells, 210
Tu, M. J. See Liu, C. B., 465
Turner, A. S. See Kobayashi, N., 123
Tuukkanen, J. See Muhonen, V., 681
Tyber, J. See Gall, K., 810

Uchida, M. See Oyane, A., 138
Uttayarat, P.
—; Toworfe, G. K.; Dietrich, F.; Lelkes, P. I.; Composto, R. J.: Topographic guidance of endothelial cells on silicone surfaces with micro- to nanogrooves: Orientation of actin filaments and focal adhesions, 668

Vacanti, J. P. See Terada, S., 907
Välimäki, V.-V.
—; Yrjans, J. J.; Vuorio E.; Aro, H. T.: Combined effect of BMP-2 gene transfer and bioactive glass microspheres on enhancement of new bone formation, 501
Vallet-Regí, M. See Padilla, S., 63
van Blitterswijk, C. A. See Moroni, L., 957
van Loon, J. J. W. A. See Loesberg, W. A., 723
Van Tassel, P. R. See Calonder, C., 316
Vardi, P. See Bloch, K., 802
Vieira, A. See Huang, Y. C., 283
Virtanen, S. See Alkhateeb, E., 934
Visai, L. See Arciola, C. R., 408
Vlakh, E. G.
—; Panarin, E. F.; Tennikova, T. B.; Suck, K.; Kasper, C.: Development of multifunctional polymer–mineral composite materials for bone tissue engineering, 333
Vogler, E. A. See Krishnan, A., 445
von Knoch, F.
—; Heckelei, A.; Wedemeyer, C.; Saxler, G.; Hilken, G.; Brankamp, J.; Sterner, T.; Landgraeber, S.; Henschke, F.; Löer, F.; von Knoch, M.: Suppression of polyethylene particle–induced osteolysis by exogenous osteoprotegerin, 288
von Knoch, M. See von Knoch, F., 288
Vorobeychik, M. See Bloch, K., 802
Vuorio, E. See Välimäki, V.-V., 501

Walboomers, X. F. See Loesberg, W. A., 723
Wang, L.-F. See Chen, W.-B., 128
Wang, Y.
—; Spencer, P.: Interfacial chemistry of class II composite restoration: Structure analysis, 580
Wang, Yanjun. See Li, K., 268
Wang, Yun. See Li, K., 268
Ward, B. See Ebert, M., 175
Watanabe, M. See Rosengren, A., 115
Webster, T. J. See Perla, V., 356
Wedemeyer, C. See von Knoch, F., 288
Welter, J. F. See Penick, K. J., 168
Wen, X. See Zhang, N., 941
Wertheimer, M. R. See Nelea, V., 216
Wilson, G. S. See Gifford, R., 755
Wimmer, M. A. See Kraft, C. N., 31
Wood, M. A. See Meredith, D. O., 541
Wu, L.
—; Ding, J.: Effects of porosity and pore size on *in vitro* degradation of three-dimensional porous poly(D,L-lactide-*co*-glycolide) scaffolds for tissue engineering, 767

Xu, H. H. K. See Burguera, E. F., 966; Zhang, Y., 832

Yamasaki, T.
—; Deie, M.; Shinomiya, R.; Izuta, Y.; Yasunaga, Y.; Yanada, S.; Sharman, P.; Ochi, M.: Meniscal regeneration using tissue engineering with a scaffold derived from a rat meniscus and mesenchymal stromal cells derived from rat bone marrow, 23
Yanada, S. See Yamasaki, T., 23
Yang, I. H.
—; Co, C. C.; Ho, C.-C.: Spatially controlled co-culture of neurons and glial cells, 976
Yang, V. C. See Emregul, E., 648
Yao, J.
—; Radin, S.; Reilly, G.; Leboy, P. S.; Ducheyne, P.: Solution-mediated effect of bioactive glass in poly (lactic-*co*-glycolic acid)–bioactive glass composites on osteogenesis of marrow stromal cells, 794
Yasunaga, Y. See Nakasa, T., 350; Yamasaki, T., 23
Yaszemski, M. J. See Rajagopalan, S., 877
Yavriyanz, K. See Bloch, K., 802
Yeh, M. K. See Huang, Y. C., 283
Yeung, K. W. K.
—; Poon, R. W. Y.; Liu, X. Y.; Ho, J. P. Y.; Chung, C. Y.; Chu, P. K.; Lu, W. W.; Chan, D.; Cheung, K. M. C.: Corrosion resistance, surface mechanical properties, and cytocompatibility of plasma immersion ion implantation–treated nickel-titanium shape memory alloys, 256
Yokoyama, Y. See Oyane, A., 138
Yoneno, K.
—; Ohno, S.; Tanimoto, K.; Honda, K.; Tanaka, N.; Doi, T.; Kawata, T.; Tanaka, E.; Kapila, S.; Tanne, K.: Multidifferentiation potential of mesenchymal stem cells in three-dimensional collagen gel cultures, 733
Yoshimoto, H. See Terada, S., 907
Yrjans, J. J. See Välimäki, V.-V., 501
Yun, H., See Li, J., 985

Zhang, C. See Zhang, N., 941
Zhang, H.
—; Aronow, M. S.; Gronowicz, G. A.: Transforming growth factor-beta 1 (TGF-β1) prevents the age-dependent decrease in bone formation in human osteoblast/implant cultures, 98
Zhang, M. See Li, Z., 485
Zhang, N.
—; Zhang, C.; Wen, X.: Fabrication of semipermeable hollow fiber membranes with highly aligned texture for nerve guidance, 941
Zhang, S. M. See Qiu, C. L., 950
Zhang, X., See Li, J., 985; Kong, L., 275
Zhang, Y. See Tan, W. B., 56
—; Xu, H. H. K.: Effects of synergistic reinforcement and absorbable fiber strength on hydroxyapatite bone cement, 832
—; Zhu, W.; Ding, J.: Preparation of thermosensitive microgels via suspension polymerization using different temperature protocols, 342
Zhao, N., See Li, J., 985; Kong, L., 275
Zhao, X.
—; Liu, X.; Ding, C.: Acid-induced bioactive titania surface, 888
Zhou, J. See Chu, C. L., 595
Zhu, W. See Zhang, Y., 342
Zilberman, M. See Shur, I.,
Zinchenko, Y. S.
—; Coger, R. N.: Engineering micropatterned surfaces for the coculture of hepatocytes and Kupffer cells, 242

Journal of Biomedical Materials Research
Subject index—Volume 75A

Absorbable fiber, 832, 966
Acellular scaffold, 232
Acid treatment, 888
Acoustic emission, 414
Acrylic bone cement, 414
Adhesion, 824
Adhesion (centrifugation assay), 855
Adhesive, 580
Age, 98
Alginate, 268, 485
Alkaline phosphatase, 210
Allograft, 841
Alloplastic alloys, 31
Amorphous oxide, 519
Aneurysm, 556
Angiogenesis, 350
Angioplasty, 710
Anterior cruciate ligament, 841
Anthraquinones, 324
Anticancer, 356
Antimicrobial, 224
Apatite, 138, 308, 888
Apatite nucleation, 478
Articular cartilage engineering, 156
Artificial cells, 917
Austenite and martensite phases, 681
Autoimmune disease, 648
Autologous chondrocytes, 612
Axonal regeneration, 941

Barium sulfate, 123
Basic fibroblast growth factor, 350
Bioactive glass, 63, 398, 501, 778, 794
Bioactivity, 63, 595, 928
Biocompatibility, 14, 31, 56, 63, 89, 192, 256, 275, 458, 755, 950
Biocompatible polymers, 333
Biodegradable, 308, 567, 710
Biodegradable polymer, 146, 185, 465, 767
Biofilm, 146
Biomaterial mechanical testing, 742
Biomaterials, 224, 333
Biomaterial-seeded cells, 612
Biomimetic, 308
Bioresorbable, 89
Bioresorbable scaffold, 702
Biostability, 175
Bivalent metals substitution, 788
Blood proteins, 445
Bone, 249
Bone-filling material, 308
Bone graft, 14
Bone implant materials, 681
Bone marrow, 23
Bone marrow stromal cells, 387
Bone morphogenetic protein (BMP), 210
Bone morphogenetic protein-2 (BMP-2), 501
Bone remodeling, 324
Bone repair, 832, 966
Bone substitute, 702
Bone tissue engineering, 89, 333
Bridging device, 941
Buprenorphine HCI, 185

Calcium phosphate, 14, 794, 934
Calcium phosphate cement, 832, 966
Calcium phosphate coating, 656
Calcium phosphate deposition, 365
Calcium titanate, 478
Calvarial model, 288
Cardiac valve, 232
Cartilage, 216
Cartilage defects, 612
Cartilage tissue engineering, 742
Catechin, 146
Cell adhesion, 530, 588
Cell alignment, 106, 668
Cell attachment, 295
Cell culture, 702, 895
Cell differentiation, 588
Cell–material interactions, 232
Cell morphology, 541
Cell proliferation, 530
Cell removal, 1
Cell responses, 629
Cell viability, 541
Ceramic scaffolds, 588
Chemical stability, 629
Chemical state, 985
Chitosan, 56, 128, 268, 275, 283, 387, 485, 556, 917, 976
Chitosan scaffold, 742
Chondrocytes, 168, 485, 494, 742
Chondrogenesis, 733
Chondroitin sulfate, 128
Chromosome aberrations, 439
Ciprofloxacin, 224
Clomipramine HC1, 185
CLSM, 917
Coagulation, 445
CoCr alloys, 365
CoCrMo, 31
Co-culture, 976
Collagen, 268, 425, 510, 689, 895
Collagen coating on Ti, 629
Collagen crosslinks, 494
Collagen gel, 494
Collagen type 1, 210
Composites, 14, 89, 333
Composite scaffolds, 778
Connective tissue, 723
Contact guidance, 374
Controlled release, 458
Corneal epithelial basement membrane, 603
Corrosion, 256, 950
Crosslinking, 510, 629, 689, 742
Cryogel sponge, 802
Cytotoxicity, 439

Dacron, 224
Decellularization, 841
Deformation, 810
Degradable hydrogel, 156
Degradation, 398, 465, 639
Degree of acetylation, 387
Delrin, 168
Dendrimer, 510
Dental calculus, 623
Dental implant, 472
Dental restoration, 580
Dentin, 580
Dextran, 316
Direct gene transfer, 501
Drug delivery, 710
Drug-loading, 519
Dynamic mechanical analysis, 957

Early strength, 966
ECM (extracellular matrix), 1, 895
EDC, 510
EGF, 841
Electrochemistry, 928, 934
Endoluminal paving, 710
Endoreduplication, 439
Endothelial cells, 295, 668
Environmental stress cracking, 175

Epithelial cell migration, 603
ePTFE, 824
Escherichia coli, 146
Excretion, 398
Extracellular matrix, 232, 425

Fast setting, 966
3D Fiber deposition, 957
Fibril assembly, 629
Fibroblast, 541, 895
Fibroblast cells, 723
Fibronectin, 316, 387
Film, 595
Fluorescence, 917
Focal adhesions, 668
Foreign body induction, 115
FXII, 445

Gap healing, 249
Gelatin, 268
Gelatin microparticles, 156
Gel-casting, 63
Gene therapy, 501
Genipin, 917
Glial cell, 976
Glow discharge plasma, 216
Glucose sensor, 755
Gold, 56
GPIIb/IIIa, 648
Griseofulvin, 639
Growth factor, 98

Hardness, 256
Heparin, 519
Heparin treatment, 192
Hepatocytes, 242, 268
HepG2 cells, 295
High strength, 832
Histological, 123
Hollow fiber-based bioreactor, 648
Hollow fiber membrane (HFM), 941
Human mesenchymal stem cell, 733
Human umbilical endothelial cell, 316
Hyaluronic acid, 494
Hydrogel, 73
Hydrophobic solid–liquid interface, 445
Hydroxyapatite, 63, 275, 788, 832, 966
Hydroxyapatite sol–gel, 656

Ica operon, 408
Image segmentation, 877
Immobilization, 210
Immune thrombocytopenic purpura (ITP), 648
Immunohistochemistry, 115
Implant, 98
Implantable cardiac devices, 192
Implant failure, 365
Implant fixation, 249
Implant toxicity, 115
Infection resistance, 224
Inflammation, 283, 458
Inflammatory response mediation, 755
Insulinoma cells, 802
Insulin secretion, 802
Interconnected porous calcium hydroxyapatite ceramic (IP-CHA), 350
Interface, 580
Interface shear strength, 472
In vitro degradation, 767
In vitro extraction, 115
In vitro test, 14
In vivo, 249, 755
In vivo osteochondral defect, 156
Ion implantation, 256
Isoelectric point, 478

Kupffer cells, 242

Layer-by-layer self-assembly, 106
Leukocyte, 199
Local delivery, 146

Macrophages, 115
Macropores, 832
Marrow stromal cells, 794
Maturation, 623
Mechanical stretch, 723
Membrane-covered stent, 556
Meniscus, 23
Mesenchymal stem cells, 23, 168
Mesh size, 957
Metal-ion release, 950
Micelles, 639
Microcapsule, 917
Microchannels, 106
Microcirculation, 31
Microcomputed tomography (μCT), 877
Microcrack formation, 414
Microgel, 342
Microparticles, 283, 458
Micropatterning, 242
Microradiography, 324
Microstructure, 595
Microtexture, 723
Mineralization, 98, 855, 985
Modeling, 530
Molecular modeling, 788
Multiplex PCR, 408

Nano, 275
Nanoparticle, 56
Nanoscale topography, 603
Nanotechnology, 356
Nanotube, 928
Natural rubber, 439
Nerve conduit, 374
Neural tissue engineering, 374
Neuron, 976
Neutrophils, 283
Nickel–titanium alloy, 595
N-isopropylacrylamide, 1, 73
NiTi, 681, 810
Nitinol, 256
Nitric oxide, 755
N-VP-DAAc, 333

Optical microscopy, 316
Optical waveguide lightmode spectroscopy, 316
Orthopedic, 356
Osteoblasts, 98, 356, 588, 702, 855, 985
Osteoclastogenesis, 288
Osteoclasts, 681
Osteoconduction, 567
Osteogenesis, 350, 733, 794
Osteolysis, 288
Osteoprotegerin, 288

Pancreatic islets, 802
Passivation, 934
PDMS, 242
Peptide crosslinker, 73
PHBHHx, 985
Phosphate glass, 656
Photosensitization, 689
Physicochemical properties, 689, 710
PLA, 374
Plasmapheresis, 648
Plasma spraying, 888
Platelets, 192, 824
Point of zero charge, 478
Poloxamine-methacrylate hydrogels, 295
Polyacetal, 168
Polyanhydrides, 185
Polycarbonates, 185
Poly(dimethylsiloxane) (PDMS), 106, 668
Poly(D,L-lactide-*co*-glycolide), 767, 778
Polyelectrolyte complexes, 128
Polyetheresteramide copolymer, 465
Polyethylene oxide, 175
Polyethylene particles, 288
Poly(ε-caprolactone) (PCL), 138
Poly (lactic-*co*-glycolic acid), 425, 794
Polylactide, 702, 824
Polylactide-polycaprolacton-*co*-polymer, 308
Poly(lactide)-poly(ethylene glycol), 639
Poly-L-lysine, 976
Polymer blends, 185
Polymer coating (IPN), 855
Polymethylmethacrylate (PMMA), 123
Poly(OEGMA-*co*-MA), 976
Polyurethane, 175, 465
Pore morphology, 767
Porous hydroxyapatite/poly-DL-lactide composite, 567

Porous scaffolds, 767, 877
Processing, 810
Prolonged duration local anesthesia, 458
Prosthesis-associated infections, 408
Protein, 342
Protein adsorption, 199, 445
Proteomics, 199
Pulmonary, 283
Pyridinoline, 494

Quantum dot, 56
Quaternary ammonium groups, 295

Rabbit, 612
Radiographic, 123
Raman spectroscopy, 580
Rapid prototyping, 957
Rat model, 501
Release, 639
Resolution, 472
Resorption, 398
RGD peptide, 249, 855

SAM, 445
Scaffold, 23, 138, 275, 333, 485, 895, 941
SDS, 841
Selenium, 356
Serum amyloid P, 199
Shape memory, 595
Sheep, 123
Simulated body fluid (SBF), 138, 478, 888
Simulation, 472
sIPNs, 73
SIS (small intestinal submucosa), 895
Skin, 425
Smooth muscle cells, 106
Solid-state nuclear magnetic resonance, 128
Spinal-cord injury, 941
SRXRF, 623
Stainless steel, 519
Staphylococcus epidermidis, 408
ST2 cells, 210
Stem cells, 216
Stent-graft, 556
Stress intensity, 414
Structure properties, 810
Structure spatial, 788
Substrate topography, 668
Supercritical foaming, 89
Superoxide, 324
Surface characterization, 242
Surface free energy, 985
Surface modification, 138, 934
Surface-modifying end group, 175
Surface roughness parameters, 472
Surface topography, 541
Surface treatment, 595
Suspension polymerization, 342
Swelling percentage, 128
Swelling ratio, 957

Temperature protocol, 342
Thermosensitive hydrogel, 342
Three-dimensional collagen gel, 733
Three-dimensional culture, 494
Thrombogenicity, 192
Ti-6Al-7Nb, 31
Ti-6Al-4V, 31
Tissue engineering, 23, 216, 232, 308, 425, 485, 556, 767, 778, 877
Titania coatings, 888
Titanium, 934
Titanium alloy, 541, 928
Titanium dioxide, 928
Titanium implant, 656
ToF-SIMS, 1

Validation, 877
Vascular bundle, 350
Vascular graft, 824
Vertebroplasty, 123
Viability, 802

Wires, 810

XPS, 1
X-ray diffraction, 324
X-ray photoelectron spectroscopy, 950

Zinc dibutyldithiocarbamate, 439
Zr-based metallic glass, 950

JOURNAL OF BIOMEDICAL MATERIALS RESEARCH PART A

Volume 75A Contents 2005

October 1 2005
Volume 75A
Issue No. 1

1 Cell Sheet Detachment Affects the Extracellular Matrix: A Surface Science Study Comparing Thermal Liftoff, Enzymatic, and Mechanical Methods
H. E. Canavan, X. Cheng, D. J. Graham, B. D. Ratner, and D. G. Castner
Published online 5 August 2005

14 *In Vitro* Evaluation of Biocompatibility of Beta-Tricalcium Phosphate-Reinforced High-Density Polyethylene; An Orthopedic Composite
S. SH. Homaeigohar, M. A. Shokrgozar, A. Yari Sadi, A. Khavandi, J. Javadpour, and M. Hosseinalipour
Published online 9 August 2005

23 Meniscal Regeneration Using Tissue Engineering with a Scaffold Derived from a Rat Meniscus and Mesenchymal Stromal Cells Derived from Rat Bone Marrow
T. Yamasaki, M. Deie, R. Shinomiya, Y. Izuta, Y. Yasunaga, S. Yanada, P. Sharman, and M. Ochi
Published online 27 July 2005

31 Microvascular Response of Striated Muscle to Common Arthroplasty-Alloys: A Comparative *In Vivo* Study with CoCrMo, Ti-6Al-4V, and Ti-6Al-7Nb
C. N. Kraft, B. Burian, O. Diedrich, J. Gessmann, M. A. Wimmer, and P. H. Pennekamp
Published online 2 August 2005

41 Effects of Controlled Fibronectin Surface Orientation on Subsequent *Staphylococcus Epidermidis* Adhesion
R. A. Jarvis and J. D. Bryers
Published online 29 July 2005

56 Surface Modification of Gold and Quantum Dot Nanoparticles with Chitosan for Bioapplications
W. B. Tan and Y. Zhang
Published online 5 August 2005

63 Bioactive and Biocompatible Pieces of HA/Sol-Gel Glass Mixtures Obtained by the Gel-Casting Method
S. Padilla, S. Sánchez-Salcedo, and M. Vallet-Regí
Published online 8 August 2005

73 Synthetic MMP-13 Degradable ECMs Based on Poly(N-Isopropylacrylamide-*co*-Acrylic Acid) Semi-Interpenetrating Polymer Networks. I. Degradation and Cell Migration
S. Kim, E. H. Chung, M. Gilbert, and K. E. Healy
Published online 27 July 2005

89 Bioresorbable Composites Prepared by Supercritical Fluid Foaming
L. M. Mathieu, M.-O. Montjovent, P-E. Bourban, D. P. Pioletti, and J.-A. E. Månson
Published online 21 July 2005

98 Transforming Growth Factor-Beta 1 (TGF-β1) Prevents the Age-Dependent Decrease in Bone Formation in Human Osteoblast/Implant Cultures
H. Zhang, M. S. Aronow, and G. A. Gronowicz
Published online 25 July 2005

106 Influence of Channel Width on Alignment of Smooth Muscle Cells by High-Aspect-Ratio Microfabricated Elastomeric Cell Culture Scaffolds
J. D. Glawe, J. B. Hill, D. K. Mills, and M. J. McShane
Published online 28 July 2005

115 Comparison of Implantation and Cytotoxicity Testing for Initially Toxic Biomaterials
A. Rosengren, L. Faxius, N. Tanaka, M. Watanabe, and L. M. Bjursten
Published online 8 August 2005

123 Histological and Radiographic Evaluation of Polymethylmethacrylate with Two Different Concentrations of Barium Sulfate in a Sheep Vertebroplasty Model
N. Kobayashi, D. Togawa, T. Fujishiro, K. A. Powell, A. S. Turner, H. B. Seim III, and T. W. Bauer
Published online 21 July 2005

128 Characterization of Polyelectrolyte Complexes Between Chondroitin Sulfate and Chitosan in the Solid State
W.-B. Chen, L.-F. Wang, J.-S. Chen, and S.-Y. Fan
Published online 22 July 2005

138 Simple Surface Modification of Poly(ε-Caprolactone) to Induce Its Apatite-Forming Ability
A. Oyane, M. Uchida, Y. Yokoyama, C. Choong, J. Triffitt, and A. Ito
Published online 25 July 2005

146 Novel Bactericidal Surface: Catechin-Loaded Surface-Erodible Polymer Prevents Biofilm Formation
R. Maeyama, I. K. Kwon, Y. Mizunoe, J. M. Anderson, M. Tanaka, and T. Matsuda
Published online 18 July 2005

156 Osteochondral Repair in the Rabbit Model Utilizing Bilayered, Degradable Oligo(Poly(Ethylene Glycol) Fumarate) Hydrogel Scaffolds
T. A. Holland, E. W. H. Bodde, L. S. Baggett, Y. Tabata, A. G. Mikos, and J. A. Jansen
Published online 28 July 2005

168 Performance of Polyoxymethylene Plastic (POM) as a Component of a Tissue Engineering Bioreactor
K. J. Penick, L. A. Solchaga, J. A. Berilla, and J. F. Welter
Published online 28 July 2005

175 *In Vivo* Biostability of Polyether Polyurethanes with Polyethylene Oxide Surface-Modifying End Groups; Resistance to Biologic Oxidation and Stress Cracking
M. Ebert, B. Ward, J. Anderson, R. McVenes, and K. Stokes
Published online 22 July 2005

185 *In Vitro* Release of Clomipramine HCl and Buprenorphine HCl From Poly Adipic Anhydride (PAA) and Poly Trimethylene Carbonate (PTMC) Blends
R. Dinarvand, M. M. Alimorad, M. Amanlou, and H. Akbari
Published online 25 July 2005

192 *In Vitro* Evaluation of Platelet Reactivity Toward Annuloplasty Devices Treated with Heparin Coating: Studies Under Flow Conditions
R. Tonda, A. M. Galán, M. Pino, M. R. Hernández, C. Ayats, J. L. Pomar, A. Ordinas, and G. Escolar
Published online 25 July 2005

199 Proteomic Analysis of Protein Adsorption: Serum Amyloid P Adsorbs to Materials and Promotes Leukocyte Adhesion
J.-K. Kim, E. A. Scott, and D. L. Elbert
Published online 4 August 2005

210 Effects of Immobilized Recombinant Human Bone Morphogenetic Protein-2/Succinylated Type I Atelocollagen on Cellular Activity of ST2 Cells
H. Tsujigiwa, H. Nagatsuka, M. Gunduz, A. Rodriguez, R. S. Rivera, R. Z. LeGeros, M. Inoue, and N. Nagai
Published online 29 July 2005

216 Selective Inhibition of Type X Collagen Expression in Human Mesenchymal Stem Cell Differentiation on Polymer Substrates Surface-Modified by Glow Discharge Plasma
V. Nelea, L. Luo, C. N. Demers, J. Antoniou, A. Petit, S. Lerouge, M. R. Wertheimer, and F. Mwale
Published online 25 July 2005

224 Development of an Infection-Resistant Bifunctionalized Dacron Biomaterial
P. Aggarwal, M. D. Phaneuf, M. J. Bide, K. A. Sousa, and F. W. LoGerfo
Published online 2 August 2005

232 Serum Deprivation Improves Seeding and Repopulation of Acellular Matrices with Valvular Interstitial Cells
M. C. Cushing, M. P. Jaeggli, K. S. Masters, L. A. Leinwand, and K. S. Anseth
Published online 8 August 2005

Technical Note

242 Engineering Micropatterned Surfaces for the Coculture of Hepatocytes and Kupffer Cells
Y. S. Zinchenko and R. N. Coger
Published online 28 July 2005

November 1, 2005
Volume 75A
Issue No. 2

249 *In Vivo* Effects of RGD-Coated Titanium Implants Inserted in Two Bone-Gap Models
B. Elmengaard, J. E. Bechtold, and K. Søballe
Published online 16 August 2005

256 Corrosion Resistance, Surface Mechanical Properties, and Cytocompatibility of Plasma Immersion Ion Implantation–Treated Nickel-Titanium Shape Memory Alloys
K. W. K. Yeung, R. W. Y. Poon, X. Y. Liu, J. P. Y. Ho, C. Y. Chung, P. K. Chu, W. W. Lu, D. Chan, and K. M. C. Cheung
Published online 2 August 2005

268 Improved Performance of Primary Rat Hepatocytes on Blended Natural Polymers
K. Li, X. Qu, Y. Wang, Y. Tang, D. Qin, Y. Wang, and M. Feng
Published online 25 July 2005

275 Preparation and Characterization of Nano-Hydroxyapatite/Chitosan Composite Scaffolds
L. Kong, Y. Gao, W. Cao, Y. Gong, N. Zhao, and X. Zhang
Published online 25 July 2005

283 Pulmonary Inflammation Caused by Chitosan Microparticles
Y. C. Huang, A. Vieira, K. L. Huang, M. K. Yeh, and C. H. Chiang
Published online 29 July 2005

288 Suppression of Polyethylene Particle–Induced Osteolysis by Exogenous Osteoprotegerin
F. von Knoch, A. Heckelei, C. Wedemeyer, G. Saxler, G. Hilken, J. Brankamp, T. Sterner, S. Landgraeber, F. Henschke, F. Löer, and M. von Knoch
Published online 8 August 2005

295 Poloxamine Hydrogels with a Quaternary Ammonium Modification to Improve Cell Attachment
A. Sosnik and M. V. Sefton
Published online 29 July 2005

308 Long-Term Evaluation of Porous Poly(ε-Caprolactone-*co*-L-Lactide) as a Bone-Filling Material
J. Holmbom, A. Södergård, E. Ekholm, M. Märtson, A. Kuusilehto, P. Saukko, and R. Penttinen
Published online 29 July 2005

316 Adsorbed Layers of Oriented Fibronectin: A Strategy to Control Cell–Surface Interactions
C. Calonder, H. W. T. Matthew, and P. R. Van Tassel
Published online 29 July 2005

324 A Preliminary *In Vitro* and *In Vivo* Study of the Effects of New Anthraquinones on Neutrophils and Bone Remodeling
L. Savarino, D. Benetti, N. Baldini, C. Tarabusi, M. Greco, R. Aloisi, S. Frascarelli, R. Fantozzi, C. Dianzani, and M. Mian
Published online 8 August 2005

333 Development of Multifunctional Polymer–Mineral Composite Materials for Bone Tissue Engineering
E. G. Vlakh, E. F. Panarin, T. B. Tennikova, K. Suck, and C. Kasper
Published online 8 August 2005

342 Preparation of Thermosensitive Microgels Via Suspension Polymerization Using Different Temperature Protocols
Y. Zhang, W. Zhu, and J. Ding
Published online 4 August 2005

350 Prefabrication of Vascularized Bone Graft Using a Combination of Fibroblast Growth Factor-2 and Vascular Bundle Implantation into a Novel Interconnected Porous Calcium Hydroxyapatite Ceramic
T. Nakasa, O. Ishida, T. Sunagawa, A. Nakamae, Y. Yasunaga, M. Agung, and M. Ochi
Published online 8 August 2005

356 Better Osteoblast Adhesion on Nanoparticulate Selenium—A Promising Orthopedic Implant Material
V. Perla and T. J. Webster
Published online 29 July 2005

365 The Effects of Calcium Phosphate Deposition upon Corrosion of CoCr Alloys and the Potential for Implant Failure
A. C. Lewis and P. J. Heard
Published online 8 August 2005

374 Permeable Guidance Channels Containing Microfilament Scaffolds Enhance Axon Growth and Maturation
J. Cai, X. Peng, K. D. Nelson, R. Eberhart, and G. M. Smith
Published online 8 August 2005

387 Rat Bone Marrow Stromal Cell Osteogenic Differentiation and Fibronectin Adsorption on Chitosan Membranes: The Effect of the Degree of Acetylation
I. F. Amaral, M. Lamghari, S. R. Sousa, P. Sampaio, and M. A. Barbosa
Published online 9 August 2005

398 Excretion of Resorption Products from Bioactive Glass Implanted in Rabbit Muscle
W. Lai, J. Garino, C. Flaitz, and P. Ducheyne
Published online 4 August 2004

408 A Multiplex PCR Method for the Detection of all Five Individual Genes of *ica* Locus in *Staphylococcus Epidermidis*. A Survey on 400 Clinical Isolates from Prosthesis-Associated Infections
C. R. Arciola, S. Gamberini, D. Campoccia, L. Visai, P. Speziale, L. Baldassarri, and L. Montanaro
Published online 8 August 2005

414 Defect-Induced Fatigue Microcrack Formation in Cement Mantle
G. Qi, J. Li, W. P. Mouchon, and G. Lewis
Published online 8 August 2005

425 Assimilating Cell Sheets and Hybrid Scaffolds for Dermal Tissue Engineering
K. W. Ng, W. Tham, T. C. Lim, and D. W. Hutmacher
Published online 16 August 2005

439 *In Vitro* Induction of Polyploidy and Chromatid Exchanges by Culture Medium Extracts of Natural Rubbers Compounded with 2-Mercaptobenzothiazole as a Positive Control Candidate for Genotoxicity Tests
A. Matsuoka, K. Isama, and T. Tsuchiya
Published online 8 August 2005

445 Scaled Interfacial Activity of Proteins at a Hydrophobic Solid/Aqueous-Buffer Interface
A. Krishnan, Y.-H. Liu, P. Cha, D. Allara, and E. A. Vogler
Published online 15 August 2005

458 Prolonged Duration Local Anesthesia with Lipid–Protein–Sugar Particles Containing Bupivacaine and Dexamethasone
G. Colombo, R. Padera, R. Langer, and D. S. Kohane
Published online 8 August 2005

465 Hydrolytic Degradation Behavior of Biodegradable Polyetheresteramide-Based Polyurethane Copolymers
C. Liu, Y. Gu, Z. Qian, L. Fan, J. Li, G. Chao, M. Tu, and W. Jia
Published online 10 August 2005

472 The Effect of Limited Lateral Resolution in the Measurement of Implant Surface Roughness: A Computer Simulation
S. Hansson and K. N. Hansson
Published online 16 August 2005

478 Evaluation of Calcium Titanate as Apatite Growth Promoter
J. Coreño and O. Coreño
Published online 8 August 2005

485 Chitosan–Alginate as Scaffolding Material for Cartilage Tissue Engineering
Z. Li and M. Zhang
Published online 9 August 2005

494 The Effect of Hyaluronic Acid with Different Molecular Weights on Collagen Crosslink Synthesis in Cultured Chondrocytes Embedded in Collagen Gels
M. Abe, M. Takahashi, and A. Nagano
Published online 9 August 2005

December 1, 2005
Volume 75A
Issue No. 3

501 Combined Effect of BMP-2 Gene Transfer and Bioactive Glass Microspheres on Enhancement of New Bone Formation
V.-V. Välimäki, J. J. Yrjans, E. Vuorio, and H. T. Aro
Published online 22 August 2005

510 Crosslinking of Collagen with Dendrimers
X. Duan and H. Sheardown
Published online 17 August 2005

519 *In Vitro* Study of Drug Loading on Polymer-Free Oxide Films of Metallic Implants
C.-M. Shih, C.-C. Shih, Y.-Y. Su, N.-C. Chang, and S.-J. Lin
Published online 4 August 2005

530 A Kinetic Approach to Osteoblast Adhesion on Biomaterial Surface
M. Bigerelle and K. Anselme
Published online 22 August 2005

541 Human Fibroblast Reactions to Standard and Electropolished Titanium and Ti–6Al–7Nb, and Electropolished Stainless Steel
D. O. Meredith, L. Eschbach, M. A. Wood, M. O. Riehle, A. S. G. Curtis, and R. G. Richards
Published online 17 August 2005

556 Biodegradable Membrane-Covered Stent From Chitosan-Based Polymers
B. Thierry, Y. Merhi, J. Silver, and M. Tabrizian
Published online 10 August 2005

567 *In Vivo* Evaluation of a Porous Hydroxyapatite/Poly-DL-Lactide Composite for Use as a Bone Substitute
S. Hasegawa, J. Tamura, M. Neo, K. Goto, Y. Shikinami, M. Saito, M. Kita, and T. Nakamura
Published online 10 August 2005

580 Interfacial Chemistry of Class II Composite Restoration: Structure Analysis
Y. Wang and P. Spencer
Published online 15 August 2005

588 Interaction of Human Osteoblasts with Bioinert and Bioactive Ceramic Substrates
D. Rokusek, C. Davitt, A. Bandyopadhyay, S. Bose, and H. L. Hosick
Published online 16 August 2005

595 Fabrication and Characteristics of Bioactive Sodium Titanate/Titania Graded Film on NiTi Shape Memory Alloy
C. L. Chu, C. Y. Chung, J. Zhou, Y. P. Pu, and P. H. Lin
Published online 16 August 2005

603 Nanoscale Topography Modulates Corneal Epithelial Cell Migration
K. A. Diehl, J. D. Foley, P. F. Nealey, and C. J. Murphy
Published online 16 August 2005

612 Transplantation of Chondrocytes Seeded on Collagen-Based Scaffold in Cartilage Defects in Rabbits
L. D. Franceschi, B. Grigolo, L. Roseti, A. Facchini, M. Fini, G. Giavaresi, M. Tschon, and R. Giardino
Published online 17 August 2005

623 A Case Study of Elemental and Structural Composition of Dental Calculus During Several Stages of Maturation Using SRXRF
J. Abraham, M. Grenón, H. J. Sánchez, C. Pérez, and R. Barrea
Published online 22 August 2005

629 Fibrillar Assembly and Stability of Collagen Coating on Titanium for Improved Osteoblast Responses
H.-W. Kim, L.-H. Li, E.-J. Lee, S.-H. Lee, and H.-E. Kim
Published online 16 August 2005

639 Poly(Lactide)-Poly(Ethylene Glycol) Micelles as a Carrier for Griseofulvin
E. Pierri and K. Avgoustakis
Published online 18 August 2005

648 A GPIIb/IIIa Bioreactor for Specific Treatment of Immune Thrombocytopenic Purpura, An Autoimmune Disease. Preparation, *In Vitro* Characterization, and Preliminary Proof-Of-Concept Animal Studies
E. Emregul, A. David, J. P. Balthasar, and V. C. Yang
Published online 17 August 2005

656 On The Feasibility of Phosphate Glass and Hydroxyapatite Engineered Coating on Titanium
H.-W. Kim, E.-J. Lee, and I.-K. Jun, H.-E. Kim
Published online 17 August 2005

668 Topographic Guidance of Endothelial Cells on Silicone Surfaces with Micro- to Nanogrooves: Orientation of Actin Filaments and Focal Adhesions
P. Uttayarat, G. K. Toworfe, F. Dietrich, P. I. Lelkes, and R. J. Composto
Published online 18 August 2005

681 The Phase State of NiTi Implant Material Affects Osteoclastic Attachment
V. Muhonen, R. Heikkinen, A. Danilov, T. Jämsä, J. Ilvesaro, and J. Tuukkanen
Published online 17 August 2005

689 Photochemical Crosslinking Improves The Physicochemical Properties of Collagen Scaffolds
B. P. Chan and K.-F. So
Published online 16 August 2005

702 The *In Vitro* Growth and Activity of Sheep Osteoblasts on Three-Dimensional Scaffolds From Poly(L/DL-Lactide) 80/20%
Z. Gugala and S. Gogolewski
Published online 18 August 2005

710 Endoluminal Hydrogel Films Made of Alginate and Polyethylene Glycol: Physical Characteristics and Drug-Eluting Properties
M. Livnat, R. Beyar, and D. Seliktar
Published online 12 August 2005

723 The Effect of Combined Cyclic Mechanical Stretching and Microgrooved Surface Topography on the Behavior of Fibroblasts
W. A. Loesberg, X. F. Walboomers, J. J. W. A. van Loon, and J. A. Jansen
Published online 18 August 2005

733 Multidifferentiation Potential of Mesenchymal Stem Cells in Three-Dimensional Collagen Gel Cultures
K. Yoneno, S. Ohno, K. Tanimoto, K. Honda, N. Tanaka, T. Doi, T. Kawata, E. Tanaka, S. Kapila, and K. Tanne
Published online 18 August 2005

742 Crosslinked Chitosan: Its Physical Properties and The Effects of Matrix Stiffness on Chondrocyte Cell Morphology and Proliferation
A. Subramanian and H.-Y. Lin
Published online 18 August 2005

December 15, 2005
Volume 75A
Issue No. 4

755 Mediation of *In Vivo* Glucose Sensor Inflammatory Response Via Nitric Oxide Release
R. Gifford, M. M. Batchelor, Y. Lee, G. Gokulrangan, M. E. Meyerhoff, and G. S. Wilson
Published online 1 September 2005

767 Effects of Porosity and Pore Size on *In Vitro* Degradation of Three-Dimensional Porous Poly(D,L-Lactide-*co*-Glycolide) Scaffolds for Tissue Engineering
L. Wu and J. Ding
Published online 24 August 2005

778 *In Vitro* and *In Vivo* Analysis of Macroporous Biodegradable Poly(D,L-Lactide-*co*-Glycolide) Scaffolds Containing Bioactive Glass
R. M. Day, V. Maquet, A. R. Boccaccini, R. Jérôme, and A. Forbes
Published online 4 August 2005

788 The Role of Bivalent Metals in Hydroxyapatite Structures as Revealed by Molecular Modeling with the HyperChem Software
I. Gutowska, Z. Machoy, and B. Machaliński
Published online 1 September 2005

794 Solution-Mediated Effect of Bioactive Glass in Poly (Lactic-*co*-Glycolic Acid)–Bioactive Glass Composites on Osteogenesis of Marrow Stromal Cells
J. Yao, S. Radin, G. Reilly, P. S. Leboy, and P. Ducheyne
Published online 1 September 2005

802 Functional Activity of Insulinoma Cells (INS-1E) and Pancreatic Islets Cultured in Agarose Cryogel Sponges
K. Bloch, V. I. Lozinsky, I. Yu. Galaev, K. Yavriyanz, M. Vorobeychik, D. Azarov, L. G. Damshkaln, B. Mattiasson, and P. Vardi
Published online 1 September 2005

810 Tensile Deformation of NiTi Wires
K. Gall, J. Tyber, V. Brice, C. P. Frick, H. J. Maier, and N. Morgan
Published online 1 September 2005

824 Evaluations of Blood Compatibility Via Protein Adsorption Treatment of the Vascular Scaffold Surfaces Fabricated with Polylactide and Surface-Modified Expanded Polytetrafluoroethylene for Tissue Engineering Applications
Y. J. Choi, S. K. Choung, C. M. Hong, I. S. Shin, S. N. Park, S. H. Hong, H. K. Park, Y. H. Park, Y. Son, and I. Noh
Published online 1 September 2005

832 Effects of Synergistic Reinforcement and Absorbable Fiber Strength on Hydroxyapatite Bone Cement
Y. Zhang and H. H. K. Xu
Published online 1 September 2005

841 Effect of Extraction Protocols and Epidermal Growth Factor on the Cellular Repopulation of Decellularized Anterior Cruciate Ligament Allografts
R. D. Harrison and P. F. Gratzer
Published online 25 August 2005

855 The Effect of Ligand Type and Density on Osteoblast Adhesion Proliferation, and Matrix Mineralization
G. M. Harbers and K. E. Healy
Published online 24 August 2005

870 Adhesion Molecule Expression by Osteogenic Cells Cultured on Various Biodegradable Scaffolds
I. Shur, M. Zilberman, D. Benayahu, and S. Einav
Published online 30 August 2005

877 Optimal Segmentation of Microcomputed Tomographic Images of Porous Tissue-Engineering Scaffolds
S. Rajagopalan, L. Lu, M. J. Yaszemski, and R. A. Robb
Published online 2 September 2005

888 Acid-Induced Bioactive Titania Surface
X. Zhao, X. Liu, and C. Ding
Published online 24 August 2005

895 Dermal Fibroblasts Cultured on Small Intestinal Submucosa: Conditions for the Formation of a Neotissue
M. Cimini, D. R. Boughner, J. A. Ronald, D. E. Johnston, and K. A. Rogers
Published online 23 August 2005

907 Hydrogel Optimization for Cultured Elastic Chondrocytes Seeded onto a Polyglycolic Acid Scaffold
S. Terada, H. Yoshimoto, J. R. Fuchs, M. Sato, I. Pomerantseva, M. K. Selig, D. Hannouche, and J. P. Vacanti
Published online 1 September 2005

917 Reaction of Chitosan with Genipin and its Fluorogenic Attributes for Potential Microcapsule Membrane Characterization
H. Chen, W. Ouyang, B. Lawuyi, C. Martoni, and S. Prakash
Published online 23 August 2005

928 Self-Organized Nanotubular Oxide Layers on Ti-6Al-7Nb and Ti-6Al-4V Formed by Anodization in NH_4F Solutions
J. M. Macak, H. Tsuchiya, L. Taveira, A. Ghicov, and P. Schmuki
Published online 1 September 2005

934 Influence of Surface Self-Modification in Ringer's Solution on the Passive Behavior of Titanium
E. Alkhateeb and S. Virtanen
Published online 25 August 2005

941 Fabrication of Semipermeable Hollow Fiber Membranes with Highly Aligned Texture for Nerve Guidance
N. Zhang, C. Zhang, and X. Wen
Published online 25 August 2005

950 The Effect of Nb Addition on Mechanical Properties, Corrosion Behavior, and Metal-Ion Release of ZrAlCuNi Bulk Metallic Glasses in Artificial Body Fluid
C. L. Qiu, L. Liu, M. Sun, and S. M. Zhang
Published online 4 October 2005

957 Three-Dimensional Fiber-Deposited PEOT/PBT Copolymer Scaffolds for Tissue Engineering: Influence of Porosity, Molecular Network Mesh Size, and Swelling in Aqueous Media on Dynamic Mechanical Properties
L. Moroni, J. R. de Wijn, and C. A. van Blitterswijk
Published online 23 August 2005

966 High Early Strength Calcium Phosphate Bone Cement: Effects of Dicalcium Phosphate Dihydrate and Absorbable Fibers
E. F. Burguera, H. H. K. Xu, S. Takagi, and L. C. Chow
Published online 25 August 2005

976 Spatially Controlled Co-Culture of Neurons and Glial Cells
I. H. Yang, C. C. Co, and C.-C. Ho
Published online 1 September 2005

985 Effects of Surface Modification of Poly (3-Hydroxybutyrate-*co*-3-Hydroxyhexanoate) (PHBHHx) on Physicochemical Properties and on Interactions with MC3T3-E1 Cells
J. Li, H. Yun, Y. Gong, N. Zhao, and X. Zhang
Published online 30 August 2005

Journal of Biomedical Materials Research (Applied Biomaterials) Author Index—Volume 75B

Abdulghani, S. See Xu, H., 64
Aida, M. See Kitagawa, T., 457
Akashi, M. See Tabata, M., 378
Alam, S. See Ramani, R., 221
Andermahr, J. See Prokop, A., 304
Asazuma, T. See Masuoka, K., 177
Ashammakhi, N. See Puumanen, K., 25
Augat, P. See Ignatius, A. A., 128
Awasthi, P. See Ramani, R., 221

Barbosa de Souza, F.
—; Silva, C. H. V.; Dibb, R. G. P.; Delfino, C. S.; Carneiro de Souza Beatrice, L.: Bonding performance of different adhesive systems to deproteinized dentin: Microtensile bond strength and scanning electron microscopy, 158
Barbucci, R.
—; Fini, M.; Giavaresi, G.; Torricelli, P.; Giardino, R.; Lamponi, S.; Leone, G.: Hyaluronic acid hydrogel added with ibuprofen-lysine for the local treatment of chondral lesions in the knee: *In vitro* and *in vivo* investigations, 42
Bechtold, J. E. See Kold, S., 49
Bedran-Russo, A. K. B. See Lobo, M. M., 122
Behiri, J. See Xu, H., 64
Birdsall, E. See Gordon, W. J., 229
Böhling, T. See Puumanen, K., 25
Boreiko, O. See Schröder, H. C., 387
Borsari, V.
—; Giavaresi, G.; Fini, M.; Torricelli, P.; Salito, A.; Chiesa, R.; Chiusoli, L.; Volpert, A.; Rimondini, L.; Giardino, R.: Physical characterization of different-roughness titanium surfaces, with and without hydroxyapatite coating, and their effect on human osteoblast-like cells, 359
Bowden, A. E.
—; Kurtz, S. M.; Edidin, A. A.: Validation of a micro-CT technique for measuring volumetric wear in retrieved acetabular liners, 205
Brash, J. L. See Shen, F., 425
Brown, S. S.
—; Kawanabe, K.; Manaka, M.; Williams, P.; Good, V.; Clarke, I. C.: Discerning alumina ball wear from confounding metal transfer artifact, 400
Busscher, H. J. See Ensing, G. T., 1

Carlos da Silva Trindade, J. See de Paula, 393
Carneiro de Souza Beatrice, L. See Barbosa de Souza, F., 158
Caughman, G. B. See Messer, R. L. W., 257
Chang, C.-J.
—; Hsu, S.-h.; Lin, F.-t.; Chang, H.; Chang, C.-S.: Low-intensity-ultrasound–accelerated nerve regeneration using cell-seeded poly(D,L-lactic acid-*co*-glycolic acid) conduits: An *in vivo* and *in vitro* study, 99
Chang, C.-S. See Chang, C.-J., 99
Chang, H. See Chang, C.-J., 99
Chang, K.-Y. See Kan, P., 185
Chang, P. L. See Shen, F., 425
Chang, Y.-I. See Lee, S.-H., 200
Chan-Park, M. B. See Zhu, Y., 193
Chen, S. See Mapili, G., 414
Chen, X. See Nan, K., 328
Chen, Y.-C. See Lin, P.-W., 146
Chen, Y.-S. See Yao, C.-H., 277
Chian, K. S. See Zhu, Y., 193
Chiesa, R. See Borsari, V., 359
Childs, R. F. See Shen, F., 425
Chiusoli, L. See Borsari, V., 359
Choi, C. Y. See Kim, S.-S., 369
Chou, Y.-F.
—; Dunn, J. C. Y.; Wu, B. M.: *In vitro* response of MC3T3-E1 preosteoblasts within three-dimensional apatite-coated PLGA scaffolds, 81
Chun-yiu, C. J. See Hiu-Yan, Y., 234
Cirone, P. See Shen, F., 425
Claes, L. See Ignatius, A. A., 128
Clare, A. G. See Hall, M. M., 435
Clarke, I. C. See Brown, S. S., 400
Compton, R. See DiCicco, M., 6
Cook, S. D.
—; Salkeld, S. L.; Patron, L. P.: Bone defect healing with an osteogenic protein-1 device combined with carboxymethylcellulose, 137
Cornelius, R. M. See Shen, F., 425

Dai, K. See Xu, X. L., 289
de Barros Coelho, M.
—; Pereira, M. M.: Sol–gel synthesis of bioactive glass scaffolds for tissue engineering: Effect of surfactant type and concentration, 451
Delfino, C. S. See Barbosa de Souza, F., 158
Denry, I. L.
—; Holloway, J. A.; Nakkula, R. J.; Walters, J. D.: Effect of niobium content on the microstructure and thermal properties of fluorapatite glass-ceramics, 18
de Paula, M.
—; Goissis, G.; Martins, V. C. A.; Carlos da Silva Trindade, J.: Injectable gels of anionic collagen: Rhamsan composites for plastic correction: Preparation, characterization, and rheological properties, 393
Dibb, R. G. P. See Barbosa de Souza, F., 158
Di Carmine, M. See Marchisio, M., 251
DiCicco, M.
—; Compton, R.; Duong, T.; Jansen-Varnum, S. A.: Electron paramagnetic resonance analyses of surface radical chemistries of γ-sterilized orthopedic materials: Implications pointing to cytotoxicity via wear debris–induced inflammation, 6
Dunn, J. C. Y. See Chou, Y.-F., 81
Duong, T. See DiCicco, M., 6

Edidin, A. A. See Bowden, A. E., 205
Edwards, K. See Messer, R. L. W., 257
Engelmann, J.
—; Volk, J.; Leyhausen, G.; Geurtsen, W.: ROS formation and glutathione levels in human oral fibroblasts exposed to TEGDMA and camphorquinone, 272
Ensing, G. T.
—; Hendriks, J. G. E.; Jongsma, J. E.; van Horn, J. R.; van der Mei, H. C.; Busscher H. J.: The influence of ultrasound on the release of gentamicin from antibiotic-loaded acrylic beads and bone cements, 1

Fini, M. See Barbucci, R., 42; Borsari, V., 359
Fisher, J. See Ingram, J. H., 210

Gelinsky, M. See Yokoyama, A., 464
Geurtsen, W. See Engelmann, J., 272
Giardino, R. See Barbucci, R., 42; Borsari, V., 359
Giavaresi, G. See Barbucci, R., 42; Borsari, V., 359
Gilbert, J. L. See Wernlé, J. D., 113
Goh, J. See Ouyang, H. W., 264
Goissis, G. See de Paula, 393
Gonçalves, R. B. See Lobo, M. M., 122
Gonzemius, M. G. See Gordon, W. J., 229
Good, V. See Brown, S. S., 400

Gordon, W. J.
—; Gonzemius, M. G.; Birdsall, E.; Wannemuehler, Y.; Mallapragada, S.; Lewallen, D. G.; Yaszemski, M. J.; O'Driscoll, S. W. D.: Chondroconductive potential of tantalum trabecular metal, 229
Gwak, S.-J. See Kim, S.-S., 369

Hahn, U. See Prokop, A., 304
Hall, M. M.
—; Clare, A. G.: Effect of glass dissolution products on the detection of proteins by silver staining, 435
Han, B. See Kim, S., 442
Hattori, H. See Masuoka, K., 177
Hedia, H. S.
—; Design of functionally graded dental implant in the presence of cancellous bone, 74
Hendriks, J. G. E. See Ensing, G. T., 1
Hibi, H. See Ito, A., 320
Hibino, E. See Ito, A., 320
Hillmich, M. See Prokop, A., 304
Hiu-Yan, Y.
—; Ling, Q.; Kwong-Man, L.; Ming, Z.; Kwok-Sui, L.; Chun-yiu, C. J.: Novel approach for quantification of porosity for biomaterial implants using microcomputed tomography (μCT), 234
Ho, H.-O. See Lin, P.-W., 146
Höfi, A. See Prokop, A., 304
Holloway, J. A. See Denry, I. L., 18
Hollstein, E. See Ignatius, A. A., 128
Honda, H. See Ito, A., 320
Howdie, S. See Kumar, R., 311
Hsieh, M.-F. See Kan, P., 185
Hsu, S.-H. See Chang, C.-J., 99

Ignatius, A. A.
—; Augat, P.; Hollstein, E.; Schorlemmer, S.; Peraus, M.; Pokinskyj, P; Claes, L: Biocompatibility and functionality of the degradable polymer alkylene bis(dilactoyl)-methacrylate for screw augmentation *in vivo*, 128
Ingham, E. See Ingram, J. H., 210
Ingram, J. H.
—; Kowalski, R.; Fisher, J.; Ingham, E.: The osteolytic response of macrophages to challenge with particles of Simplex P, Endurance, Palacos R, and Vertebroplastic bone cement particles *in vitro*, 210
Inoue, T. See Tsukeoka, T., 168
Ishihara, M. See Masuoka, K., 177
Ito, A.
—; Hibino, E.; Shimizu, K.; Kobayashi, T.; Yamada, Y.; Hibi, H.; Ueda, M.; Honda, H.: Magnetic force-based mesenchymal stem cell expansion using antibody-conjugated magnetoliposomes, 320

Jansen-Varnum, S. A. See DiCicco, M., 6
Jongsma, J. E. See Ensing, G. T., 1
Jubel, A. See Prokop, A., 304
Jun, I.-K. See Kim, H.-W., 34

Kan, P.
—; Lin, X.-Z.; Hsieh, M.-F.; Chang, K.-Y.: Thermogelling emulsions for vascular embolization and sustained release of drugs, 185
Kawanabe, K. See Brown, S. S., 400
Kawasaki, T. See Yokoyama, A., 464
Kellomäki, M. See Puumanen, K., 25
Kikuchi, M. See Masuoka, K., 177
Kim, B.-S. See Kim, S.-S., 369
Kim, H.-E. See Kim, H.-W., 34; Lee, S.-H., 200
Kim, H.-W. See Lee, S.-H., 200
—; Lee, E.-J.; Jun, I.-K.; Kim, H.-E.; Knowles, J. C.: Degradation and drug release of phosphate glass/polycaprolactone biological composites for hard-tissue regeneration, 34
Kim, S.
—; Nimni, M. E.; Yang, Z.; Han, B.: Chitosan/gelatin–based films crosslinked by proanthocyanidin, 442
Kim, S.-S.
—; Gwak, S.-J.; Choi, C. Y.; Kim, B.-S.: Skin regeneration using keratinocytes and dermal fibroblasts cultured on biodegradable microspherical polymer scaffolds, 369
Kitagawa, T.
—; Tanimoto, Y.; Odaki, M.; Nemoto, K.; Aida, M.: Influence of implant/abutment joint designs on abutment screw loosening in a dental implant system, 457
Knowles, J. C. See Kim, H.-W., 34
Kobayashi, T. See Ito, A., 320
Kohgo, T. See Yokoyama, A., 464
Kold, S.
—; Rahbek, O.; Zippor, B.; Bechtold, J. E.; Søballe, K.: Bone compaction enhances fixation of hydroxyapatite-coated implants in a canine gap model, 49
Kong, Y.-M. See Lee, S.-H., 200
König, U. See Yokoyama, A., 464
Kowalski, R. See Ingram, J. H., 210
Krasko, A. See Schröder, H. C., 387
Kumar, R.
—; Howdie, S.; Münstedt, H.: Polyamide/silver antimicrobials: Effect of filler types on the silver ion release, 311
Kurosawa, H. See Shibuya, K., 405
Kurtz, S. M. See Bowden, A. E., 205
Kwok-Sui, L. See Hiu-Yan, Y., 234
Kwong-Man, L. See Hiu-Yan, Y., 234

Lamponi, S. See Barbucci, R., 42
Lassila, L. V. J. See Tuusa, S. M. R., 334
Lee, E.-J. See Kim, H.-W., 34
Lee, S.-H. See Lee, S.-H., 200
—; Kim, H.-W.; Kong, Y.-M.; Kim, H.-E.; Lee, S.-H.; Chang, Y.-I.: Fluoride coatings on orthodontic wire for controlled release of fluorine ion, 200
Leone, G. See Barbucci, R., 42
Lewallen, D. G. See Gordon, W. J., 229
Lewis, J. B. See Messer, R. L. W., 257
Leyhausen, G. See Engelmann, J., 272
Li, A. A. See Shen, F., 425
Lin, F. See Wang, X., 91
Lin, F.-T. See Chang, C.-J., 99
Lin, P.-W.
—; Wu, C.-C.; Chen, C.-H.; Ho, H.-O.; Chen, Y.-C.; Sheu, M.-T.: Characterization of cortical neuron outgrowth in two- and three-dimensional culture systems, 146
Lin, X.-Z. See Kan, P., 185
Ling, Q. See Hiu-Yan, Y., 234
Liu, B.-S. See Yao, C.-H., 277
Lobo, M. M.
—; Gonçalves, R. B.; Pimenta, L. A. F.; Bedran-Russo, A. K. B.; Pereira, P. N. R.: *In vitro* evaluation of caries inhibition promoted by self-etching adhesive systems containing antibacterial agents, 122
Lockwood, P. E. See Messer, R. L. W., 257
Lou, J. See Xu, X. L., 289
Lu, Q. See Wang, X., 91
Lu, Y. See Mapili, G., 414

Mahkam, M.
—; Using pH-sensitive hydrogels containing cubane as a crosslinking agent for oral delivery of insulin, 108
Mallapragada, S. See Gordon, W. J., 229
Manaka, M. See Brown, S. S., 400
Mapili, G.
—; Lu, Y.; Chen, S.; Roy, K.: Laser-layered microfabrication of spatially patterned functionalized tissue-engineering scaffolds, 414
Marchisio, M.
—; Di Carmine, M.; Pagone, R.; Piattelli, A.; Miscia, S.: Implant surface roughness influences osteoclast proliferation and differentiation, 251
Margolis, D. S. See Szivek, J. A., 243
Martins, V. C. A. See de Paula, 393
Masuoka, K.
—; Asazuma, T.; Ishihara, M.; Sato, M.; Hattori, H.; Ishihara, M.; Yoshihara, Y.; Matsui, T.; Takase, B.; Kikuchi, M.; Nemoto, K.: Tissue engineering of articular cartilage using an allograft of cultured chondrocytes in a membrane-sealed atelocollagen honeycomb-shaped scaffold (ACHMS scaffold), 177
Mathur, G. N. See Ramani, R., 221
Matinlinna, J. P. See Tuusa, S. M. R., 334

Matsui, T. See Masuoka, K., 177
McManus, A. J. See Moser, R. C., 56
Messer, R. L. W.
—; Lockwood, P. E.; Tseng, W. Y.; Edwards, K.; Shaw, M.; Caughman, G. B.; Lewis, J. B.; Wataha, J. C.: Mercury (II) alters mitochondrial activity of monocytes at sublethal doses via oxidative stress mechanisms, 257
Michihiro, R. See Tsukeoka, T., 168
Ming, Z. See Hiu-Yan, Y., 234
Miscia, S. See Marchisio, M., 251
Miyagi, J. See Tsukeoka, T., 168
Moe, K. See Ouyang, H. W., 264
Moriya, H. See Tsukeoka, T., 168
Moser, R. C.
—; McManus, A. J.; Riley, S. L.; Thomas, K. A.: Strength retention of 70:30 poly(L-lactide-*co*-D,L-lactide) following real-time aging, 56
Müller, W. E. G. See Schröder, H. C., 387
Münstedt, H. See Kumar, R., 311

Nakkula, R. J. See Denry, I. L., 18
Nan, K.
—; Wang, Y.; Chen, X.; Ning, C.; Wang, L.; Zhao, N.: Application research of plasma-enhanced electrochemical surface ceramic-coating technology on titanium implants, 328
Nemoto, K. See Kitagawa, T., 457; Masuoka, K., 177
Ng, K. W. See Xu, X. L., 289
Nimni, M. E. See Kim, S., 442
Ning, C. See Nan, K., 328
Niwa, S. See Shibuya, K., 405
Noorjahan, S. E.
—; Sastry, T. P.: Physiologically clotted fibrin-calcined bone composite—a possible bone graft substitute, 343

Odaki, M. See Kitagawa, T., 457
O'Driscoll, S. W. D. See Gordon, W. J., 229
Ogomi, D. See Tabata, M., 378
Ohgushi, H. See Tabata, M., 378
Ohtsuki, C. See Tsukeoka, T., 168
Ouyang, H. W.
—; Toh, S. L.; Goh, J.; Tay, T. E.; Moe, K.: Assembly of bone marrow stromal cell sheets with knitted poly(L-lactide) scaffold for engineering ligament analogs, 264

Pagone, R. See Marchisio, M., 251
Parihar, J. K. S. See Ramani, R., 221
Patron, L. P. See Cook, S. D., 137
Peltola, M. J. See Tuusa, S. M. R., 334
Peraus, M. See Ignatius, A. A., 128
Pereira, M. M. See de Barros Coelho, M., 451
Pereira, P. N. R. See Lobo, M. M., 122
Piattelli, A. See Marchisio, M., 251
Pimenta, L. A. F. See Lobo, M. M., 122
Pokinskyj, P. See Ignatius, A. A., 128
Pompe, W. See Yokoyama, A., 464
Prokop, A.
—; Höfi, A.; Hellmich, M.; Jubel, A.; Andermahr, J.; Rehm, K. E.; Hahn, U.: Degradation of poly-L/DL-lactide *versus* TCP composite pins: A three-year animal study, 304
Puumanen, K.
—; Kellomäki, M.; Ritsilä, V.; Böhling, T.; Törmälä, P.; Waris, T.; Ashammakhi, N.: A novel bioabsorbable composite membrane of Polyactive® 70/30 and bioactive glass number 13–93 in repair of experimental maxillary alveolar cleft defects, 25

Rahbek, O. See Kold, S., 49
Ramani, R.
—; Parihar, J. K. S.; Ranganathaiah, C.; Awasthi, P.; Alam, S.; Mathur, G. N.: Free volume study on calcification process in an intraocular lens after cataract surgery, 221
Ranganathaiah, C. See Ramani, R., 221
Rehm, K. E. See Prokop, A., 304
Reiber, A. See Schröder, H. C., 387
Riley, S. L. See Moser, R. C., 56
Rimondini, L. See Borsari, V., 359
Ritsilä, V. See Puumanen, K., 25
Roberto, R. F. See Szivek, J. A., 243
Roy, K. See Mapili, G., 414

Sabokbar, A. See Xu, H., 64
Salito, A. See Borsari, V., 359
Salkeld, S. L. See Cook, S. D., 137
Sastry, T. P. See Noorjahan, S. E., 343
Sato, M. See Masuoka, K., 177
Schorlemmer, S. See Ignatius, A. A., 128
Schröder, H. C.
—; Boreiko, O.; Krasko, A.; Reiber, A.; Schwertner, H.; Müller, W. E. G.: Mineralization of SaOS-2 cells on enzymatically (silicatein) modified bioactive osteoblast-stimulating surfaces, 387
Schwertner, H. See Schröder, H. C., 387
Shaw, M. See Messer, R. L. W., 257
Shen, F.
—; Li, A. A.; Cornelius, R. M.; Cirone, P.; Childs, R. F.; Brash, J. L.; Chang, P. L.: Biological properties of photocrosslinked alginate microcapsules, 425
Sheu, M.-T. See Lin, P.-W., 146
Shibuya, K.
—; Kurosawa, H.; Takeuchi, H.; Niwa, S.: The medium-term results of treatment with hydroxyapatite implants, 405
Shimizu, K. See Ito, A., 320
Shimoda, T. See Tabata, M., 378
Silva, C. H. V. See Barbosa de Souza, F., 158
Søballe, E. See Kold, S., 49
Sugihara, K. See Tabata, M., 378
Sugino, A. See Tsukeoka, T., 168
Suzuki, M. See Tsukeoka, T., 168
Szeri, A. J. See Zohdi, T. I., 351
Szivek, J. A.
—; Roberto, R. F.; Margolis, D. S.: *In vivo* strain measurements from hardware and lamina during spine fusion, 243

Tabata, M.
—; Shimoda, T.; Sugihara, K.; Ogomi, D.; Ohgushi, H.; Akashi, M.: Apatite formed on/in agarose gel as a bone-grafting material in the treatment of periodontal infrabony defect, 378
Takase, B. See Masuoka, K., 177
Takeuchi, H. See Shibuya, K., 405
Tang, T. See Xu, X. L., 289
Tanimoto, Y. See Kitagawa, T., 457
Tay, T. E. See Ouyang, H. W., 264
Thomas, K. A. See Moser, R. C., 56
Toh, S. L. See Ouyang, H. W., 264
Törmälä, P. See Puumanen, K., 25
Torricelli, P. See Barbucci, R., 42; Borsari, V., 359
Tsai, H.-M. See Yao, C.-H., 277
Tseng, W. Y. See Messer, R. L. W., 257
Tsukeoka, T.
—; Suzuki, M.; Ohtsuki, C.; Tsuneizumi, Y.; Miyagi, J.; Sugino, A.; Inoue, T.; Michihiro, R.; Moriya, H.: Enhanced fixation of implants by bone ingrowth to titanium fiber mesh: Effect of incorporation of hydroxyapatite powder, 168
Tsuneizumi, Y. See Tsukeoka, T., 168
Tuusa, S. M. R.
—; Lassila, L. V. J.; Matinlinna, J. P.; Peltola, M. J.; Vallittu, P. K.: Initial adhesion of glass-fiber–reinforced composite to the surface of porcine calvarial bone, 334

Ueda, M. See Ito, A., 320

Vallittu, P. K. See Tuusa, S. M. R., 334
van der Mei, H. C. See Ensing, G. T., 1
van Horn, J. R. See Ensing, G. T., 1
Volk, J. See Engelmann, J., 272
Volpert, A. See Borsari, V., 359

Walters, J. D. See Denry, I. L., 18
Wang, I. See Nan, K., 328
Wang, X.
—; Yan, Y.; Xiong, Z.; Lin, F.; Wu, R.; Zhang, R.; Lu, Q.: Preparation and evaluation of ammonia-treated collagen/chitosan matrices for liver tissue engineering, 91
Wang, Y. See Nan, K., 328
Wannemuehler, Y. See Gordon, W. J., 229

Waris, T. See Puumanen, K., 25
Wataha, J. C. See Messer, R. L. W., 257
Watari, F. See Yokoyama, A., 464
Wernlé, J. D.
—; Gilbert, J. L.: Micromechanics of shelf-aged and retrieved UHMWPE tibial inserts: Indentation testing, oxidative profiling, and thickness effects, 113
Williams, P. See Brown, S. S., 400
Wu, B. M. See Chou, Y.-F., 81
Wu, C.-C. See Lin, P.-W., 146
Wu, R. See Wang, X., 91

Xiong, Z. See Wang, X., 91
Xu, H.
—; Abdulghani, S.; Behiri, J.; Sabokbar, A.: Osteolytic potential of triphenyl bismuth as an alternative contrast medium in acrylic bone cement, 64
Xu, X. L.
—; Lou, J.; Tang, T.; Ng, K. W.; Zhang, J.; Yu, C.; Dai, K.: Evaluation of different scaffolds for BMP-2 genetic orthopedic tissue engineering, 289

Yamada, Y. See Ito, A., 320
Yan, Y. See Wang, X., 91
Yang, Z. See Kim, S., 442
Yao, C.-H.
—; Tsai, H.-M.; Chen, Y.-S.; Liu, B.-S.: Fabrication and evaluation of a new composite composed of tricalcium phosphate, gelatin, and Chinese medicine as a bone substitute, 277
Yaszemski, M. J. See Gordon, W. J., 229
Yokoyama, A.
—; Gelinsky, M.; Kawasaki, T.; Kohgo, T.; König, U.; Pompe, W.; Watari, F.: Biomimetic porous scaffolds with high elasticity made from mineralized collagen–an animal study, 464
Yoshihara, Y. See Masuoka, K., 177
Yu, C. See Xu, X. L., 289

Zhang, J. See Xu, X. L., 289
Zhang, R. See Wang, X., 91
Zhao, N. See Nan, K., 328
Zhu, Y.
—; Chan-Park, M. B.; Chian, K. S.: The growth improvement of porcine esophageal smooth muscle cells on collagen-grafted poly(DL-lactide-*co*-glycolide) membrane, 193
Zippor, B. See Kold, S., 49
Zohdi, T. I.
—; Szeri, A. J.: Fatigue of kidney stones with heterogeneous microstructure subjected to shock-wave lithotripsy, 351

Journal of Biomedical Materials Research (Applied Biomaterials) Subject index—Volume 75B

Acrylic, 128
Adhesion, 158
Adhesive, 334
Adhesive systems, 122
Agarose, 289
Alginate, 289
Alginate microcapsules, 425
Alumina balls, 400
Angiostatin, 425
Animal model, 137
Anionic collagen, 393
Antibody, 320
Antimicrobial, 311
Apatite–agarose composite, 378
Articular cartilage, 177, 229

Bioactive glass, 25
Bioactive glasses, 451
Bioceramics, 234
Biocompatibility, 393, 442
Biocompatibility/hard tissue, 128
Biodegradable pins, 304
Biodegradation, 128, 304, 378
Biomaterial, 146
Biomechanics, 128
Biomimetic, 81, 464
Biomimetic mineralization, 328
Bioresorbable, 25
Bone, 74, 334, 464
Bone cement, 64, 128
Bone graft, 25, 137, 378
Bone graft substitute, 343, 405
Bone ingrowth, 168
Bone morphogenetic protein, 289
Bone resorption, 64

CaF_2, 200
Calcification, 221
Calcined bone, 343
Calcium phosphate, 277, 289, 304
Camphorquinone, 272
Cancer, 425
Carrier, 137
Cartilage, 42
Cell culture, 277, 320
Cell–material interactions, 359
Cell sheet, 264
Ceramic, 74, 359
Chitosan, 91, 343, 442
Chondrocytes, 177
Clinical application, 405
Collagen, 74, 91, 146, 158, 193, 229, 289, 387, 464
Compaction, 49
Composite, 304, 393
Composite/hard tissue, 277, 464
Computer modeling/simulation, 457
Covalent immobilization, 193
Crosslink, 442
Crystallization, 18
Cubane, 108
Cytokines, 210
Cytotoxicity, 6

Degradation, 34
Dental amalgam, 257
Dental/craniofacial material, 25
Dental material, 158
Dermal fibroblast, 369
Diffusion, 221
3D micropatterning, 414
Drug delivery system, 1
Drug release, 34, 277
DUDMA, 6

E-beam deposition, 200
Embolization, 185
Emulsion, 185
EPR, 6
Esophageal smooth muscle cell, 193
Evaluation method, 234

Fatigue, 351
Fibrin, 146, 289
Finite element analysis, 457
Fluorapatite, 18
Fluoride coating, 200
Fluorine release, 200
Foams, 451
FRC, 334
Free volume, 221
FTIR, 113

Gap model, 49
Gelatin, 442
Gene therapy, 289, 425
Glass-ceramic, 18
Glass dissolution, 34
Glass dissolution products, 435
Glutathione, 257, 272

Hard-tissue regenerative, 34
Hepatocyte, 91
Hip joint, 400
Histomorphometry, 168
Hyaluronic acid, 42
Hydrogel, 108, 289
Hydroxyapatite, 49, 74, 81, 168, 243, 387, 464
Hydroxy-carbonate-apatite, 328
Hydroxyl radical, 6

Ibuprofen-lysine, 42
IL-6, 210
IL-1β, 210
Immunoisolation, 425
Immunoliposomes, 320
Implant design, 457
Implant fixation, 49
Implant surface, 251
Indentation testing, 113
Infection, 1
Insulin, 108
Interpenetrating network, 425
Intraocular lens, 221
In vitro, 158
In vitro microbial caries model, 122

Keratinocyte, 369
Knitted PLLA scaffold, 264

Lactide, 56
Lamina strain, 243
Ligament tissue engineering, 264
Low-intensity ultrasonic stimulation, 99

Macrophages, 210
Magnetite particles, 320
Marrow stromal cell, 264
Matrix, 137
Mechanical profiling, 113
Mechanical property, 168
Medium-term follow-up, 405
Membrane, 25
Mesenchymal stem cells, 320

Metal transfer, 400
Microcapsules, 425
Microcomputed tomography, 234
MicroCT, 205
Microdamage, 351
Microfabrication, 414
Microstructure, 18
Mitochondrial activity, 257
Monocyte-macrophages, 251
Multinucleated giant cells, 251

Nerve regeneration, 99
Nonlinear dynamic analysis, 457
N-vinylpyrrolidone, 425

Oral delivery, 108
Oriented growth, 328
Orthopedic materials, 6
Orthopedics, 56
Osmotic pressure test, 425
Osseointegration, 49
Osteoblast mineralization, 387
Osteoclast, 64, 251
Osteoclast differentiation, 251
Osteoclast proliferation, 251
Osteogenesis, 81
Osteogenic protein, 137
Osteoinduction, 343
Osteolysis, 210
Oxidation, 113

Paclitaxel, 185
Periodontal disease, 378
Phosphate glass (P-glass), 34
Physiologically clotted fibrin, 343
PLA, 56
Plasma electrochemical surface ceramic coating (PECC), 328
Plasma spray, 359
Plates, 56
Pluronic, 289
PMMA, 128, 210
PMMA acrylic cements, 1
Polyamide, 311
Polycaprolactone, 34
Poly(D,L-lactic acid-*co*-glycolic acid), 99
Poly(DL-lactide-*co*-glycolide), 193
Polyethylene, 205
Polylactic acid, 304
Poly(lactide-*co*-glycolide) microsphere, 369
Polymer, 128
Polymer blend, 91
Polysaccharides, 122
Pore connectivity, 234
Porosity, 1, 74, 234
Positron lifetime, 221
Primer, 334
Proanthocyanidin, 442
Proteins, 435
Pulp fibroblasts, 272

Rabbit, 42
Radiopacity, 64
RAW cells, 251
Reactive oxygen species, 272
Redox, 257
Regeneration, 177
Registration, 205
Retrieval, 205
Rhamsan, 393
Rheology, 393
Rotation, 457

SaOS-2 cells, 387
Scaffolds, 81, 91, 177, 229, 378, 414, 442, 451
Schwann cells, 99
Screws, 56
Secondary caries, 122
Selenium, 257
Silane, 334
Silica, 387
Silicatein, 387
Silicone conduit, 99
Silver ion release, 311
Silver staining, 435
Skin regeneration, 369
Sol–gel, 451
Spinal fusion, 243
Stem cells, 414
Stereolithography, 414
Streptococcus mutans, 122
Stress, 74, 351
Supercritical carbon dioxide, 311
Surface characterization, 359
Surface strain, 243
Sustained release, 185
Swelling, 108
Synthetic hydroxyapatite, 405

TEGDMA, 272
Telemetry, 243
Thermoresponsive, 185
Three-dimensional culture model, 146
Tissue culture, 277
Tissue engineering, 81, 177, 229, 289, 369, 414, 451
Titanium, 168
Titanium (alloys), 359
TNF-α, 210
Triphenyl bismuth, 64
Trunnions, 400

UHMWPE, 6, 113
Ultrasound, 1

Wear, 205, 400
Wear particles, 210

JOURNAL OF
BIOMEDICAL
MATERIALS
RESEARCH
PART B: APPLIED BIOMATERIALS
Volume 75B Contents 2005

Contents

October 2005
Volume 75B
Number 1

1 The Influence of Ultrasound on the Release of Gentamicin from Antibiotic-Loaded Acrylic Beads and Bone Cements
Geert T. Ensing, Johannes G. E. Hendriks, Jelmer E. Jongsma, Jim R. van Horn, Henny C. van der Mei, and Henk J. Busscher
Published online 25 July 2005

6 Electron Paramagnetic Resonance Analyses of Surface Radical Chemistries of γ-Sterilized Orthopedic Materials: Implications Pointing to Cytotoxicity via Wear Debris–Induced Inflammation
Michael DiCicco, Ryan Compton, Thanh Duong, and Susan A. Jansen-Varnum
Published online 25 July 2005

18 Effect of Niobium Content on the Microstructure and Thermal Properties of Fluorapatite Glass-Ceramics
I. L. Denry, J. A. Holloway, R. J. Nakkula, and J. D. Walters
Published online 15 July 2005

25 A Novel Bioabsorbable Composite Membrane of Polyactive® 70/30 and Bioactive Glass Number 13-93 in Repair of Experimental Maxillary Alveolar Cleft Defects
K. Puumanen, M. Kellomäki, V. Ritsilä, T. Böhling, P. Törmälä, T. Waris, and N. Ashammakhi
Published online 13 July 2005

34 Degradation and Drug Release of Phosphate Glass/Polycaprolactone Biological Composites for Hard-Tissue Regeneration
Hae-Won Kim, Eun-Jung Lee, In-Kook Jun, Hyoun-Ee Kim, and Jonathan C. Knowles
Published online 6 July 2005

42 Hyaluronic Acid Hydrogel Added With Ibuprofen-Lysine for the Local Treatment of Chondral Lesions in the Knee: *In Vitro* and *In Vivo* Investigations
Rolando Barbucci, Milena Fini, Gianluca Giavaresi, Paola Torricelli, Roberto Giardino, Stefania Lamponi, and Gemma Leone
Published online 6 July 2005

49 Bone Compaction Enhances Fixation of Hydroxyapatite-Coated Implants in a Canine Gap Model
Søren Kold, Ole Rahbek, Berit Zippor, Joan E. Bechtold, and Kjeld Søballe
Published online 15 July 2005

56 Strength Retention of 70:30 Poly(L-Lactide-*co*-D,L-Lactide) Following Real-Time Aging
Rodney C. Moser, Anastasia J. McManus, Susan L. Riley, and Kevin A. Thomas
Published online 6 July 2005

64 Osteolytic Potential of Triphenyl Bismuth as an Alternative Contrast Medium in Acrylic Bone Cement
Hu Xu, Saba Abdulghani, John Behiri, and Afsie Sabokbar
Published online 13 July 2005

74 Design of Functionally Graded Dental Implant in the Presence of Cancellous Bone
H. S. Hedia
Published online 15 July 2005

81 *In Vitro* Response of MC3T3-E1 Preosteoblasts within Three-Dimensional Apatite-Coated PLGA Scaffolds
Yu-Fen Chou, James C. Y. Dunn, and Benjamin M. Wu
Published online 6 July 2005

91 Preparation and Evaluation of Ammonia-Treated Collagen/Chitosan Matrices for Liver Tissue Engineering
Xiaohong Wang, Yongnian Yan, Zhuo Xiong, Feng Lin, Rendong Wu, Renji Zhang, and Qingping Lu
Published online 13 July 2005

99 Low-Intensity-Ultrasound–Accelerated Nerve Regeneration Using Cell-Seeded Poly(D,L-Lactic Acid-co-Glycolic Acid) Conduits: An *In Vivo* and *In Vitro* Study
Chen-Jung Chang, Shan-hui Hsu, Fang-tsun Lin, Han Chang, and Chao-Sheng Chang
Published online 13 July 2005

108 Using pH-Sensitive Hydrogels Containing Cubane as a Crosslinking Agent for Oral Delivery of Insulin
Mehrdad Mahkam
Published online 15 July 2005

113 Micromechanics of Shelf-Aged and Retrieved UHMWPE Tibial Inserts: Indentation Testing, Oxidative Profiling, and Thickness Effects
James D. Wernlé and Jeremy L. Gilbert
Published online 20 July 2005

122 *In Vitro* Evaluation of Caries Inhibition Promoted by Self-Etching Adhesive Systems Containing Antibacterial Agents
Maristela M. Lobo, Reginaldo B. Gonçalves, Luiz André F. Pimenta, Ana Karina B. Bedran-Russo, and Patrícia N. R. Pereira
Published online 19 July 2005

128 Biocompatibility and Functionality of the Degradable Polymer Alkylene bis(dilactoyl)-methacrylate for Screw Augmentation *In Vivo*
Anita A. Ignatius, Peter Augat, Elke Hollstein, Sandra Schorlemmer, Manfred Peraus, Peter Pokinskyj, and Lutz Claes
Published online 13 July 2005

137 Bone Defect Healing with an Osteogenic Protein-1 Device Combined with Carboxymethylcellulose
Stephen D. Cook, Samantha L. Salkeld, and Laura P. Patron
Published online 20 July 2005

146 Characterization of Cortical Neuron Outgrowth in Two- and Three-Dimensional Culture Systems
Po-Wei Lin, Chi-Chen Wu, Chien-Ho Chen, Hsiu-O Ho, Yi-Chun Chen, and Ming-Thau Sheu
Published online 6 July 2005

158 Bonding Performance of Different Adhesive Systems to Deproteinized Dentin: Microtensile Bond Strength and Scanning Electron Microscopy
Fábio Barbosa de Souza, Cláudio Heliomar Vicente Silva, Regina Guenka Palma Dibb, Carina Sincler Delfino, and Lúcia Carneiro de Souza Beatrice
Published online 13 July 2005

168 Enhanced Fixation of Implants by Bone Ingrowth to Titanium Fiber Mesh: Effect of Incorporation of Hydroxyapatite Powder
Tadashi Tsukeoka, Masahiko Suzuki, Chikara Ohtsuki, Yoshikazu Tsuneizumi, Jin Miyagi, Atsushi Sugino, Takayuki Inoue, Ryouichi Michihiro, and Hideshige Moriya
Published online 15 July 2005

177 Tissue Engineering of Articular Cartilage Using an Allograft of Cultured Chondrocytes in a Membrane-Sealed Atelocollagen Honeycomb-Shaped Scaffold (ACHMS Scaffold)
Kazunori Masuoka, Takashi Asazuma, Masayuki Ishihara, Masato Sato, Hidemi Hattori, Miya Ishihara, Yasuo Yoshihara, Takemi Matsui, Bonpei Takase, Makoto Kikuchi, and Koichi Nemoto
Published online 15 July 2005

185 Thermogelling Emulsions for Vascular Embolization and Sustained Release of Drugs
Pei Kan, Xi-Zhang Lin, Ming-Fa Hsieh, and Ken-Yuen Chang
Published online 21 July 2005

193 The Growth Improvement of Porcine Esophageal Smooth Muscle Cells on Collagen-Grafted Poly(DL-Lactide-*co*-Glycolide) Membrane
Yabin Zhu, Mary B. Chan-Park, and Kerm Sin Chian
Published online 15 July 2005

200 Fluoride Coatings on Orthodontic Wire for Controlled Release of Fluorine Ion
Su-Hee Lee, Hae-Won Kim, Young-Min Kong, Hyoun-Ee Kim, Sung-Ho Lee, and Young-Il Chang
Published online 20 July 2005

205 Validation of a Micro-CT Technique for Measuring Volumetric Wear in Retrieved Acetabular Liners
A. E. Bowden, S. M. Kurtz, and A. A. Edidin
Published online 21 July 2005

210 The Osteolytic Response of Macrophages to Challenge with Particles of Simplex P, Endurance, Palacos R, and Vertebroplastic Bone Cement Particles *In Vitro*
Joanne H. Ingram, Rick Kowalski, John Fisher, and Eileen Ingham
Published online 19 July 2005

221 Free Volume Study on Calcification Process in an Intraocular Lens after Cataract Surgery
R. Ramani, J. K. S. Parihar, C. Ranganathaiah, P. Awasthi, S. Alam, and G. N. Mathur
Published online 15 July 2005

November 2005
Volume 75B
Number 2

229 Chondroconductive Potential of Tantalum Trabecular Metal
Wanda J. Gordon, Michael G. Conzemius, Elizabeth Birdsall, Yvonne Wannemuehler, Surya Mallapragada, David G. Lewallen, Michael J. Yaszemski, and Shawn W. D. O'Driscoll
Published online 13 September 2005

234 Novel Approach for Quantification of Porosity for Biomaterial Implants using Microcomputed Tomography (μCT)
Yeung Hiu-Yan, Qin Ling, Lee Kwong-Man, Zhang Ming, Leung Kwok-Sui, and Cheng Jack Chun-yiu
Published online 17 August 2005

243 *In Vivo* Strain Measurements from Hardware and Lamina during Spine Fusion
John A. Szivek, Rolando F. Roberto, and David S. Margolis
Published online 13 September 2005

251 Implant Surface Roughness Influences Osteoclast Proliferation and Differentiation
Marco Marchisio, Maristella Di Carmine, Rita Pagone, Adriano Piattelli, and Sebastiano Miscia
Published online 2 August 2005

257 Mercury (II) Alters Mitochondrial Activity of Monocytes at Sublethal Doses via Oxidative Stress Mechanisms
Regina L.W. Messer, Petra E. Lockwood, Wan Y. Tseng, Kerry Edwards, Melissa Shaw, Gretchen B. Caughman, Jill B. Lewis, and John C. Wataha
Published online 18 August 2005

264 Assembly of Bone Marrow Stromal Cell Sheets with Knitted Poly (L-Lactide) Scaffold for Engineering Ligament Analogs
Hong Wei Ouyang, Siew Lok Toh, James Goh, Tong Earn Tay, and Kyaw Moe
Published online 13 September 2005

272 ROS Formation and Glutathione Levels in Human Oral Fibroblasts Exposed to TEGDMA and Camphorquinone
J. Engelmann, J. Volk, G. Leyhausen, and W. Geurtsen
Published online 3 August 2005

277 Fabrication and Evaluation of a New Composite Composed of Tricalcium Phosphate, Gelatin, and Chinese Medicine as a Bone Substitute
Chun-Hsu Yao, Hung-Ming Tsai, Yueh-Sheng Chen, and Bai-Shuan Liu
Published online 15 July 2005

289 Evaluation of Different Scaffolds for BMP-2 Genetic Orthopedic Tissue Engineering
X. Leon Xu, Jueren Lou, Tingting Tang, Kenneth Wayman Ng, Junhui Zhang, Chaofeng Yu, and Kerong Dai
Published online 15 July 2005

304 Degradation of Poly-L/DL-Lactide versus TCP Composite Pins: A Three-Year Animal Study
Axel Prokop, Andreas Höfl, Martin Hellmich, Axel Jubel, Jonas Andermahr, Klaus Emil Rehm, and Ulrich Hahn
Published online 21 July 2005

311 Polyamide/Silver Antimicrobials: Effect of Filler Types on the Silver Ion Release
Radhesh Kumar, Steve Howdle, and Helmut Münstedt
Published online 6 July 2005

320 Magnetic Force-Based Mesenchymal Stem Cell Expansion Using Antibody-Conjugated Magnetoliposomes
Akira Ito, Eri Hibino, Kazunori Shimizu, Takeshi Kobayashi, Yoichi Yamada, Hideharu Hibi, Minoru Ueda, and Hiroyuki Honda
Published online 15 July 2005

328 Application Research of Plasma-Enhanced Electrochemical Surface Ceramic-Coating Technology on Titanium Implants
Kaihui Nan, Yingjun Wang, Xiaofeng Chen, Chengyun Ning, Lingyu Wang, and Naru Zhao
Published online 19 July 2005

334 Initial Adhesion of Glass-Fiber–Reinforced Composite to the Surface of Porcine Calvarial Bone
S. M. R. Tuusa, L. V. J. Lassila, J. P. Matinlinna, M. J. Peltola, and P. K. Vallittu
Published online 19 July 2005

343 Physiologically Clotted Fibrin-Calcined Bone Composite—A Possible Bone Graft Substitute
S. E. Noorjahan and T. P. Sastry
Published online 21 July 2005

351 Fatigue of Kidney Stones with Heterogeneous Microstructure Subjected to Shock-Wave Lithotripsy
T. I. Zohdi and A. J. Szeri
Published online 8 August 2005

359 Physical Characterization of Different-Roughness Titanium Surfaces, With and Without Hydroxyapatite Coating, and Their Effect on Human Osteoblast-Like Cells
Veronica Borsari, Gianluca Giavaresi, Milena Fini, Paola Torricelli, Armando Salito, Roberto Chiesa, Loris Chiusoli, Andreas Volpert, Lia Rimondini, and Roberto Giardino
Published online 12 August 2005

369 Skin Regeneration Using Keratinocytes and Dermal Fibroblasts Cultured on Biodegradable Microspherical Polymer Scaffolds
Sang-Soo Kim, So-Jung Gwak, Cha Yong Choi, and Byung-Soo Kim
Published online 15 July 2005

378 Apatite Formed on/in Agarose Gel as a Bone-Grafting Material in the Treatment of Periodontal Infrabony Defect
Masashi Tabata, Toru Shimoda, Kazumasa Sugihara, Daisuke Ogomi, Hajime Ohgushi, and Mitsuru Akashi
Published online 20 July 2005

387 Mineralization of SaOS-2 Cells on Enzymatically (Silicatein) Modified Bioactive Osteoblast-Stimulating Surfaces
Heinz C. Schröder, Oleksandra Boreiko, Anatoli Krasko, Andreas Reiber, Heiko Schwertner, and Werner E. G. Müller
Published online 20 July 2005

393 Injectable Gels of Anionic Collagen:Rhamsan Composites for Plastic Correction: Preparation, Characterization, and Rheological Properties
Márcio de Paula, Gilberto Goissis, Virgínia C. A. Martins, and José Carlos da Silva Trindade
Published online 21 July 2005

400 Discerning Alumina Ball Wear from Confounding Metal Transfer Artifact
S. S. Brown, K. Kawanabe, M. Manaka, P. Williams, V. Good, and I. C. Clarke
Published online 21 July 2005

405 The Medium-Term Results of Treatment With Hydroxyapatite Implants
Kazuyuki Shibuya, Hisashi Kurosawa, Hiroyasu Takeuchi, and Shigeo Niwa
Published online 22 July 2005

414 Laser-Layered Microfabrication of Spatially Patterned Functionalized Tissue-Engineering Scaffolds
Gazell Mapili, Yi Lu, Shaochen Chen, and Krishnendu Roy
Published online 15 July 2005

425 Biological Properties of Photocrosslinked Alginate Microcapsules
Feng Shen, Anna Aihua Li, Rena M. Cornelius, Pasquale Cirone, Ronald F Childs, John L. Brash, and Patricia L. Chang
Published online 20 July 2005

435 Effect of Glass Dissolution Products on the Detection of Proteins by Silver Staining
M. M. Hall and A. G. Clare
Published online 22 July 2005

442 Chitosan/Gelatin–Based Films Crosslinked by Proanthocyanidin
Sungwoo Kim, Marcel E. Nimni, Zhi Yang, and Bo Han
Published online 26 July 2005

451 Sol–Gel Synthesis of Bioactive Glass Scaffolds for Tissue Engineering: Effect of Surfactant Type and Concentration
Marlene de Barros Coelho and Marivalda Magalhães Pereira
Published online 26 July 2005

457 Influence of Implant/Abutment Joint Designs on Abutment Screw Loosening in a Dental Implant System
Tsuyoshi Kitagawa, Yasuhiro Tanimoto, Misako Odaki, Kimiya Nemoto, and Masahiro Aida
Published online 22 July 2005

464 Biomimetic Porous Scaffolds with High Elasticity Made from Mineralized Collagen—An Animal Study
Atsuro Yokoyama, Michael Gelinsky, Takao Kawasaki, Takao Kohgo, Ulla König, Wolfgang Pompe, and Fumio Watari
Published online 25 July 2005

474 Author Index to Volume 75B

478 Subject Index to Volume 75B

I Volume 75B Contents